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(71) Applicant: **MILLENNIUM PREDICTIVE MEDICINE, INC.** [US/US]; One Kendall Square Bldg. 700, Cambridge, MA 02139 (US).

(72) Inventors: **SCHLEGEL, Robert**; 211 Melrose Street, Auburndale, MA 02466 (US). **ENDEGE, Wilson**; 222 Normandy Drive, Norwood, MA 02062 (US). **MONAHAN, John, E.**; 942 West Street, Walpole, MA 02081 (US).

(74) Agents: **SMITH, DeAnn, F.** et al.; Lahive & Cockfield, LLP, 28 State Street, Boston, MA 02109 (US).

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(54) Title: COMPOSITIONS, KITS, AND METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY OF HUMAN PROSTATE CANCER

(57) Abstract: The invention relates to compositions, kits, and methods for detecting, characterizing, preventing, and treating human prostate cancers. A variety of markers are provided, wherein changes in the levels of expression of one or more of the markers is correlated with the presence of prostate cancer.

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COMPOSITIONS, KITS, AND METHODS FOR  
IDENTIFICATION, ASSESSMENT, PREVENTION, AND  
THERAPY OF HUMAN PROSTATE CANCER

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## RELATED APPLICATIONS

The present application claims priority to U.S. provisional patent application serial no. 60/178,525, filed on January 24, 2000, U.S. provisional patent application serial no. 60/183,245, filed on February 17, 2000, U.S. provisional patent application serial no. 60/190,139, filed on March 16, 2000, U.S. provisional patent application serial  
10 no. 60/208,126, filed on May 31, 2000, U.S. provisional patent application serial no. 60/219,705, filed on July 18, 2000, and U.S. provisional patent application serial no. 60/255,160, filed on December 13, 2000, all of which are expressly incorporated by reference.

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## FIELD OF THE INVENTION

The field of the invention is prostate cancer, including diagnosis, characterization, management, and therapy of prostate cancer.

## BACKGROUND OF THE INVENTION

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The increased number of cancer cases reported in the United States, and, indeed, around the world, is a major concern. Currently there are only a handful of treatments available for specific types of cancer, and these provide no absolute guarantee of success. In order to be most effective, these treatments require not only an early detection of the malignancy, but also a reliable assessment of the severity of the  
25 malignancy.

Carcinoma of the prostate (PCA) is the most frequently diagnosed cancer in men in the United States, and is the second leading cause of male cancer deaths (Karp *et al.*, 1996, *Cancer Res.* 56:5547-5556). The acute susceptibility of this organ to cancer in men is not understood. Skene's glands represent a tissue in females that is homologous  
30 to the male prostate, but not a site where significant neoplastic transformation is observed.



An unusual challenge presented by prostate cancer is that most prostate tumors do not represent life threatening conditions. Projections from autopsy surveys indicate that as many as 11 million American men have prostate cancer (Dhom, 1983, *J. Cancer Res. Clin. Oncol.*, 106:210-218). These figures are consistent with clinical observations of prostate carcinomas, which normally exhibit a slow and lingering course of progression. Such disease progression results in relatively few prostate tumors developing into cases of clinical concern during the lifetime of the patient. If, upon detection with available methods, the cancer appears well-differentiated, organ-confined and focal, treatment normally can not extend the life expectancy of older patients.

Unfortunately, the prostate carcinomas that are progressive in nature frequently have already metastasized by the time of clinical detection with available methods. Survival rates for individuals with metastatic prostate cancer are quite low. Between these two extremes are patients with prostate tumors that will metastasize during their lifetimes, but have not yet done so. For these patients, surgical removal of the prostate is curative and extends life expectancy. Therefore, accurate determination of which group a newly diagnosed patient falls into is critical in determining optimal treatment and patient survival.

Currently there is at least one early and noninvasive test available to the physician for detecting asymptomatic disease. The presence of Prostate Specific Antigen (PSA) can be measured with relative ease from blood samples using standard antibody-based detection kits. Abnormally high levels of this antigen in a patient's serum indicate a likelihood of prostate disease, possibly either a carcinoma, Benign Prostatic Hyperplasia (BPH) or prostatitis. In the majority of cases, PSA elevation is due to BPH or prostatitis rather than carcinoma.

Although clinical and pathologic stage and histological grading systems (e.g., Gleason's) have been used to indicate prognosis for groups of patients based on the degree of tumor differentiation or the type of glandular pattern (Carter and Coffey, In: J. P. Karr and H. Yamanak (eds.), *Prostate Cancer: The Second Tokyo Symposium*, pp. 19-27, New York: Elsevier, 1989.; Diamond *et al.*, *J. Urol.*, 128: 729-734, 1982), these systems do not adequately predict the progression rate of the cancer. While the use of computer-system image analysis of histologic sections of primary lesions for "nuclear roundness" has been suggested as an aide in the management of individual patients

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(Diamond *et al.*, 1982, *J. Urol.*, 128:729-734), this method is of limited use in studying the progression of the disease.

The analysis of DNA content/ploidy using flow cytometry and FISH has been demonstrated to have utility predicting prostate cancer aggressiveness (Pearsons *et al.*,  
5 1993, *J. Urol.*, 150:120-125; Macoska *et al.*, 1994, *Cancer Res.*, 54: 3824-3830;  
Visakorpi *et al.*, 1994, *Am. J. Pathol.*, 145:1-7; Takahashi *et al.*, 1994, *Cancer Res.*,  
54:3574-3579; Alcaraz *et al.*, *Cancer Res.*, 55:3998-4002, 1994), but these methods are  
expensive, time-consuming, and the latter methodology requires the construction of  
centromere-specific probes for analysis. There also exist specific nuclear matrix  
10 proteins whose expression has been reported to be associated with prostate cancer.  
However, these protein markers apparently do not distinguish between BPH and prostate  
cancer (Partin *et al.*, 1993, *Cancer Res.*, 53:744-746). Unfortunately, markers that  
cannot distinguish between benign and malignant prostate tumors are of little value.

It would therefore be beneficial to provide specific methods and reagents for the  
15 diagnosis, staging, prognosis, monitoring, and treatment of diseases associated with  
prostate cancer, or to indicate a predisposition to such for preventative medicine.

#### SUMMARY OF THE INVENTION

The invention relates to a method of assessing whether a patient is afflicted with  
20 prostate cancer. The method of the present invention comprises the step of comparing  
the level of expression of a marker (listed within Tables 1-1 to 6) in a patient sample  
with the normal level of expression of the marker in a control, *e.g.*, a sample from a  
patient without prostate cancer. A significant difference between the level of expression  
of the marker in the patient sample and the normal level is an indication that the patient  
25 is afflicted with prostate cancer.

In one embodiment of the methods of the present invention, the sample  
comprises cells obtained from the patient. The cells may be found in a prostate tissue  
sample collected, for example, by a prostate tissue biopsy or histology section, or a bone  
marrow biopsy. In another embodiment, the patient sample is a prostate-associated body  
30 fluid. Such fluids include, for example, blood fluids, lymph, urine, prostatic fluid and  
semen.

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In accordance with the methods of the present invention, the presence and/or level of expression of the marker in a sample can be assessed, for example, by detecting the presence in the sample of:

- 5       • a protein or protein fragment corresponding to the marker (*e.g.* using a reagent, such as an antibody, an antibody derivative, or an antibody fragment, which binds specifically with the protein or protein fragment)
- a metabolite which is produced directly (*i.e.*, catalyzed) or indirectly by a protein corresponding to the marker
- 10       • a transcribed polynucleotide (*e.g.* an mRNA or a cDNA), or fragment thereof, having at least a portion with which the marker is substantially homologous (*e.g.* by contacting a mixture of transcribed polynucleotides obtained from the sample with a substrate having one or more of the markers listed within Tables 1-1 to 6 fixed thereto at selected positions)
- 15       • a transcribed polynucleotide or fragment thereof, wherein the polynucleotide anneals with the marker under stringent hybridization conditions.

The methods of the present invention are useful for further diagnosing patients having an identified prostate mass or symptoms associated with prostate cancer, *e.g.* abnormally high levels of PSA. The methods of the present invention can further be of particular use with patients having an enhanced risk of developing prostate cancer (*e.g.*,  
20 patients having a familial history of prostate cancer and patients identified as having a mutant oncogene). The methods of the present invention may further be of particular use in monitoring the efficacy of treatment of a prostate cancer patient (*e.g.* the efficacy of chemotherapy).

25       All cancers have staging schemes that are used to describe the degree to which the cancer has progressed. The TNM staging approach assigns the primary tumor (T) to one of four stages (and to additional substages within these categories) based on the size and location of the primary tumor within the prostate. A T1 designation indicates a microscopic tumor which cannot be detected by a digital rectal exam. A T2NO  
30 designation refers to a tumor palpable upon a digital rectal exam but are contained within the prostate capsule ( local disease). In all forms of stage T3 disease the tumors have extended through the prostate capsule into the surrounding connective tissue or

seminal vesicles. The T4 designation refers to tumors that have escaped from the prostate and can be found in the pelvic region. The N stage refers to whether the primary tumor has spread to the regional lymph nodes (pelvic lymph nodes). The M stage refers to whether the tumor cells have metastasized to distant sites.

5           The methods of the present invention may be performed using a plurality (*e.g.* 2, 3, 5, or 10 or more) of markers. According to a method involving a plurality of markers, the level of expression in the sample of each of a plurality of markers independently selected from the markers listed in Tables 1-1 to 6 is compared with the normal level of expression of each of the plurality of markers in samples of the same type obtained from  
10   control humans not afflicted with prostate cancer. A significantly altered level of expression in the sample of one or more of the markers listed in Tables 1-1 to 6, or some combination thereof, relative to that marker's corresponding normal levels, is an indication that the patient is afflicted with prostate cancer. The markers of Tables 1-1 to 6 may also be used in combination with known prostate cancer markers in the methods  
15   of the present invention, *e.g.* PSA analysis.

In a preferred method of assessing whether a patient is afflicted with prostate cancer (*e.g.*, new detection ("screening"), detection of recurrence, reflex testing), the method comprises comparing:

- a) the level of expression of a marker in a patient sample, wherein at least  
20   one marker is selected from the markers of Tables 1-1 to 6, and
- b) the normal level of expression of the marker in a control non-prostate cancer sample.

A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with prostate  
25   cancer.

The invention further relates to a method of assessing the efficacy of a therapy for inhibiting prostate cancer in a patient. This method comprises comparing:

- a) expression of a marker in a first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein the marker is  
30   selected from the group consisting of the markers listed within Tables 1-1 to 6, and

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b) expression of the marker in a second sample obtained from the patient following provision of the portion of the therapy.

A significant difference between the level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for  
5 inhibiting prostate cancer in the patient.

It will be appreciated that in this method the "therapy" may be any therapy for treating prostate cancer including, but not limited to, chemotherapy, immunotherapy, gene therapy, radiation therapy and surgical removal of tissue. Thus, the methods of the invention may be used to evaluate a patient before, during and after therapy, for  
10 example, to evaluate the reduction in tumor burden.

The present invention therefore further comprises a method for monitoring the progression of prostate cancer in a patient, the method comprising:

a) detecting in a patient sample at a first time point, the expression of a marker, wherein the marker is selected from the group consisting of the markers  
15 listed in Tables 1-1 to 6;

b) repeating step a) at a subsequent time point in time; and

c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of prostate cancer in the patient.

The present invention also includes a method for assessing the aggressiveness or  
20 indolence of prostate cancer (*e.g.*, staging), the method comprising comparing:

a) the level of expression of a marker in a patient sample, wherein at least one marker is selected from the markers of Tables 1-1 to 6, and

b) the normal level of expression of the marker in a control sample.

A significant difference between the level of expression in the sample and the normal  
25 level is an indication that the cancer is aggressive or indolent.

The present invention further includes a method for determining whether prostate cancer has metastasized or is likely to metastasize in the future, the method comprising comparing:

a) the level of expression of a marker in a patient sample, wherein at least  
30 one marker is selected from the markers of Tables 1-1 to 6 and

b) the normal level (or non-metastatic level) of expression of the marker in a control sample.

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A significant difference between the level of expression in the patient sample and the normal level (or non-metastatic level) is an indication that the prostate cancer has metastasized or is likely to metastasize in the future.

- The invention also includes a method of selecting a composition for inhibiting prostate cancer in a patient. This method comprises the steps of:
- a) obtaining a sample comprising cancer cells from the patient;
  - b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;
  - c) comparing expression of a marker listed within Tables 1-1 to 6 in each of the aliquots; and
  - d) selecting one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

- In addition, the invention includes a method of inhibiting prostate cancer in a patient. This method comprises the steps of:
- a) obtaining a sample comprising cancer cells from the patient;
  - b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;
  - c) comparing expression of a marker listed within Tables 1-1 to 6 in each of the aliquots; and
  - d) administering to the patient at least one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

- The invention also includes a kit for assessing whether a patient is afflicted with prostate cancer. This kit comprises reagents for assessing expression of a marker listed within Tables 1-1 to 6.

- In another aspect, the invention relates to a kit for assessing the suitability of each of a plurality of compounds for inhibiting a prostate cancer in a patient. The kit comprises a reagent for assessing expression of a marker listed within Tables 1-1 to 6, and may also comprise a plurality of compounds.

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In another aspect, the invention relates to a kit for assessing the presence of prostate cancer cells. This kit comprises an antibody, wherein the antibody binds specifically with a protein or protein fragment corresponding to a marker listed within Tables 1-1 to 6. The kit may also comprise a plurality of antibodies, wherein the  
5 plurality binds specifically with a protein or protein fragment corresponding to a different marker listed within Tables 1-1 to 6.

The invention also includes a kit for assessing the presence of prostate cancer cells, wherein the kit comprises a nucleic acid probe. The probe binds specifically with a transcribed polynucleotide corresponding to a marker listed within Tables 1-1 to 6.  
10 The kit may also comprise a plurality of probes, wherein each of the probes binds specifically with a transcribed polynucleotide corresponding to a different marker listed within Tables 1-1 to 6.

The invention further relates to a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with prostate  
15 cancer. The method comprises isolating a protein or protein fragment corresponding to a marker listed within Tables 1-1 to 6, immunizing a mammal using the isolated protein or protein fragment, isolating splenocytes from the immunized mammal, fusing the isolated splenocytes with an immortalized cell line to form hybridomas, and screening individual hybridomas for production of an antibody which specifically binds with the  
20 protein or protein fragment, to isolate the hybridoma. The invention also includes an antibody produced by this method.

The invention further includes a method of assessing the prostate carcinogenic potential of a test compound. This method comprises the steps of:

a) maintaining separate aliquots of prostate cells in the presence and  
25 absence of the test compound; and

b) comparing expression of a marker in each of the aliquots.

The marker is selected from those listed within Tables 1-1 to 6. A significant difference between the level of expression of the marker in the aliquot maintained in the presence of (or exposed to) the test compound, relative to the aliquot maintained in the absence of  
30 the test compound, is an indication that the test compound possesses prostate carcinogenic potential.

Additionally, the invention includes a kit for assessing the prostate carcinogenic potential of a test compound. The kit comprises prostate cells and a reagent for assessing expression of a marker in each of the aliquots. The marker is selected from those listed within Tables 1-1 to 6.

5           The invention further relates to a method of treating a patient afflicted with prostate cancer. This method comprises providing to cells of the patient an antisense oligonucleotide complementary to a polynucleotide corresponding to a marker listed within Tables 1-1 to 6, which is overexpressed in prostate cancer. In an alternative method, expression of a gene corresponding to a marker selected from the markers listed  
10 in Tables 1-1 to 6 which is underexpressed in prostate cancer, is increased.

The invention includes a method of inhibiting prostate cancer in a patient at risk for developing prostate cancer. This method comprises inhibiting or increasing expression (or overexpression) of a gene corresponding to a marker listed within Tables 1-1 to 6, that is either overexpressed or underexpressed, respectively, in prostate cancer.

15           It will be appreciated that the methods and kits of the present invention may also include known cancer markers including known prostate cancer markers. It will further be appreciated that the methods and kits may be used to identify cancers other than prostate cancer.

## 20                           DETAILED DESCRIPTION OF THE INVENTION

The invention relates to newly discovered correlations between expression of certain markers and the cancerous state of prostate cells. It has been discovered that the level of expression of individual markers and combinations of markers described herein correlates with the presence of prostate cancer or a pre-malignant condition in a patient.

25           Methods are provided for detecting the presence of prostate cancer in a sample, the absence of prostate cancer in a sample, the stage of a prostate cancer, the metastatic potential of a prostate cancer, the indolence or aggressiveness of the cancer, and other characteristics of prostate cancer that are relevant to prevention, diagnosis, characterization and therapy of prostate cancer in a patient.

30



### Definitions

As used herein, each of the following terms has the meaning associated with it in this section.

The articles "a" and "an" are used herein to refer to one or to more than one (*i.e.* to at least one) of the grammatical object of the article. By way of example, "an element" means one element or more than one element.

A "marker" is a naturally-occurring polymer corresponding to at least one of the nucleic acids listed within Tables 1-1 to 6. For example, markers include, without limitation, sense and anti-sense strands of genomic DNA (*i.e.* including any introns occurring therein), RNA generated by transcription of genomic DNA (*i.e.* prior to splicing), RNA generated by splicing of RNA transcribed from genomic DNA, and proteins generated by translation of spliced RNA (*i.e.* including proteins both before and after cleavage of normally cleaved regions such as transmembrane signal sequences). As used herein, "marker" may also include a cDNA made by reverse transcription of an RNA generated by transcription of genomic DNA (including spliced RNA).

As used herein a polynucleotide "corresponds to" another (a first) polynucleotide if it is related to the first polynucleotide by any of the following relationships: The second polynucleotide comprises the first polynucleotide and the second polynucleotide encodes a gene product; 2) The second polynucleotide is 5' or 3' to the first polynucleotide in cDNA, RNA, genomic DNA, or fragment of any of these polynucleotides. For example, a second polynucleotide may be a fragment of a gene that includes the first and second polynucleotides. The first and second polynucleotides are related in that they are components of the gene coding for a gene product, such as a protein or antibody. However, it is not necessary that the second polynucleotide comprises or overlaps with the first polynucleotide to be encompassed within the definition of "corresponding to" as used herein. For example, the first polynucleotide may be a fragment of a 3' untranslated region of the second polynucleotide. The first and second polynucleotide may be fragments of a gene coding for a gene product. The second polynucleotide may be an exon of the gene while the first polynucleotide may be an intron of the gene; 3) The second polynucleotide is the complement of the first polynucleotide.

The term "probe" refers to any molecule which is capable of selectively binding to a specifically intended target molecule, for example a marker of the invention.

Probes can be either synthesized by one skilled in the art, or derived from appropriate biological preparations. For purposes of detection of the target molecule, probes may be specifically designed to be labeled, as described herein. Examples of molecules that can  
5 be utilized as probes include, but are not limited to, RNA, DNA, cDNA, proteins, antibodies, and organic monomers.

A "prostate-associated" body fluid is a fluid which, when in the body of a patient, contacts or passes through prostate cells or into which cells or proteins shed  
10 from prostate cells are capable of passing. Exemplary prostate-associated body fluids include blood fluids, semen, prostate fluid, lymph and urine.

The "normal" level of expression of a marker is the level of expression of the marker in prostate cells or prostate-associated body fluids of a patient, *e.g.* a human, not afflicted with prostate cancer.

"Over-expression" and "under-expression" of a marker refer to expression of the  
15 marker of a patient at a greater or lesser level, respectively, than normal level of expression of the marker (*e.g.* at least two-fold greater or lesser level).

As used herein, the term "promoter/regulatory sequence" means a nucleic acid sequence which is required for expression of a gene product operably linked to the  
20 promoter/regulatory sequence. In some instances, this sequence may be the core promoter sequence and in other instances, this sequence may also include an enhancer sequence and other regulatory elements which are required for expression of the gene product. The promoter/regulatory sequence may, for example, be one which expresses the gene product in a tissue-specific manner.

25 A "constitutive" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell under most or all physiological conditions of the cell.

An "inducible" promoter is a nucleotide sequence which, when operably linked  
30 with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only when an inducer which corresponds to the promoter is present in the cell.

A "tissue-specific" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only if the cell is a cell of the tissue type corresponding to the promoter.

5 A "transcribed polynucleotide" is a polynucleotide (*e.g.* an RNA, a cDNA, or an analog of one of an RNA or cDNA) which is complementary to or homologous with all or a portion of a mature RNA made by transcription of a genomic DNA corresponding to a marker of the invention and normal post-transcriptional processing (*e.g.* splicing), if any, of the transcript.

10 "Complementary" refers to the broad concept of sequence complementarity between regions of two nucleic acid strands or between two regions of the same nucleic acid strand. It is known that an adenine residue of a first nucleic acid region is capable of forming specific hydrogen bonds ("base pairing") with a residue of a second nucleic acid region which is antiparallel to the first region if the residue is thymine or uracil.

15 Similarly, it is known that a cytosine residue of a first nucleic acid strand is capable of base pairing with a residue of a second nucleic acid strand which is antiparallel to the first strand if the residue is guanine. A first region of a nucleic acid is complementary to a second region of the same or a different nucleic acid if, when the two regions are arranged in an antiparallel fashion, at least one nucleotide residue of the first region is

20 capable of base pairing with a residue of the second region. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, when the first and second portions are arranged in an antiparallel fashion, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residues of the first portion are capable of base pairing with nucleotide

25 residues in the second portion. More preferably, all nucleotide residues of the first portion are capable of base pairing with nucleotide residues in the second portion.

"Homologous" as used herein, refers to nucleotide sequence similarity between two regions of the same nucleic acid strand or between regions of two different nucleic acid strands. Homology between two regions is expressed in terms of the proportion of

30 nucleotide residue positions of the two regions that are occupied by the same nucleotide residue. By way of example, a region having the nucleotide sequence 5'-ATTGCC-3' and a region having the nucleotide sequence 5'-TATGGC-3' share 50% homology.

Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residue positions of each of the portions are occupied by the same nucleotide residue. More preferably, all nucleotide  
5 residue positions of each of the portions are occupied by the same nucleotide residue.

A marker is "fixed" to a substrate if it is covalently or non-covalently associated with the substrate such that the substrate can be rinsed with a fluid (*e.g.* standard saline citrate, pH 7.4) without a substantial fraction of the marker dissociating from the substrate.

10 As used herein, a "naturally-occurring" nucleic acid molecule refers to an RNA or DNA molecule having a nucleotide sequence that occurs in nature.

Expression of a marker in a patient is "significantly" higher than the normal level of expression of a marker if the level of expression of the marker is greater than the normal level by an amount greater than the standard error of the assay employed to  
15 assess expression, and preferably at least twice, and more preferably three, four, five or ten times that amount. Alternately, expression of the marker in the patient can be considered "significantly" higher or lower than the normal level of expression if the level of expression is at least about two, and preferably at least about three, four, or five times, higher or lower, respectively, than the normal level of expression of the marker.

20 Prostate cancer is "inhibited" if at least one symptom of the cancer is alleviated, terminated, slowed, or prevented. As used herein, prostate cancer is also "inhibited" if recurrence or metastasis of the cancer is reduced, slowed, delayed, or prevented.

A kit is any manufacture (*e.g.* a package or container) comprising at least one reagent, *e.g.* a probe, for specifically detecting a marker of the invention, the  
25 manufacture being promoted, distributed, or sold as a unit for performing the methods of the present invention.

### Description

The present invention is based, in part, on identification of markers which are  
30 differentially expressed in prostate cancer cells when compared with normal (*i.e.* non-cancerous) prostate cells. The markers of the invention correspond to DNA, RNA, and polypeptide molecules which can be detected in one or both of normal and cancerous

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prostate cells. The presence, absence, or level of expression of one or more of these markers in prostate cells is herein correlated with the cancerous state of the tissue. The invention thus includes compositions, kits, and methods for assessing the cancerous state of prostate cells (*e.g.* cells obtained from a human, cultured human cells, archived or  
5 preserved human cells and *in vivo* cells).

The compositions, kits, and methods of the invention have the following uses, among others:

- 1) assessing whether a patient is afflicted with prostate cancer;
  - 2) assessing the stage of prostate cancer in a human patient;
  - 10 3) assessing the grade of prostate cancer in a patient;
  - 4) assessing the benign or malignant nature of prostate cancer in a patient;
  - 5) assessing the metastatic potential of prostate cancer in a patient;
  - 6) assessing the histological type of neoplasm (*e.g.*  
15 *Adenocarcinoma*) associated with prostate cancer in a patient;
  - 7) assessing the indolent or aggressive nature of prostate cancer in a patient;
  - 8) making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with prostate cancer;
  - 20 9) assessing the presence of prostate cancer cells;
  - 10) assessing the efficacy of one or more test compounds for inhibiting prostate cancer in a patient;
  - 11) assessing the efficacy of a therapy for inhibiting prostate cancer in a patient;
  - 25 12) monitoring the progression of prostate cancer in a patient;
  - 13) selecting a composition or therapy for inhibiting prostate cancer in a patient;
  - 14) treating a patient afflicted with prostate cancer;
  - 15) inhibiting prostate cancer in a patient;
  - 30 16) assessing the prostate carcinogenic potential of a test compound;
- and

17) inhibiting prostate cancer in a patient at risk for developing prostate cancer.

The invention thus includes a method of assessing whether a patient is afflicted with prostate cancer which includes assessing whether the patient has pre-metastasized prostate cancer. This method comprises comparing the level of expression of a marker in a patient sample and the normal level of expression of the marker in a control, *e.g.*, a non-prostate cancer sample. A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with prostate cancer. The marker is selected from the group consisting of the markers listed within Tables 1-1 to 6. Although one or more molecules corresponding to the markers listed within Tables 1-1 to 6 may have been described by others, the significance of the level of expression of these markers with regard to the cancerous state of prostate cells has not previously been recognized.

The invention also encompasses polynucleotides which differ from that of the polynucleotides described herein, but which produce the same phenotypic effect, such as an allelic variant. These altered, but phenotypically equivalent polynucleotides are referred to as "equivalent nucleic acids." This invention also encompasses polynucleotides characterized by changes in non-coding regions that do not alter the polypeptide produced therefrom when compared to the polynucleotide herein. This invention further encompasses polynucleotides, which hybridize to the polynucleotides of the subject invention under conditions of moderate or high stringency. Alternatively, the polynucleotides are at least 85%, or at least 90%, or more preferably, greater or equal to 95% identical as determined by a sequence alignment program when run under default parameters.

The following summarizes the Tables of the present invention:

Table 1-1 shows the sequences expressed at least five-fold higher in at least one of five prostate stage T2NO tumors, or at least three-fold higher in at least two of five prostate stage T2NO tumors, when compared with the average expression level in BPH tissue. The average expression level in BPH tissue is the mean of four specimens.

Table 1-2 shows the sequences expressed at least five-fold higher in at least one of five prostate stage T2NO tumors, or at least three-fold higher in at least two of five prostate stage T2NO tumors, when compared with the average expression level in

normal prostate tissue. The average expression level in the normal prostate tissue is the mean of four specimens.

Table 1-3 is a merged list of Tables 1-1 and 1-2.

Table 1-4 shows sequences which meet at least one of the following six criteria:

- 5       • Sequences expressed at least ten-fold higher in at least one of five prostate stage T2NO tumors, when compared with the average expression level in normal prostate tissue.
- Sequences expressed at least five-fold higher in at least three of five prostate stage T2NO tumors, when compared with the average expression  
10       level in normal prostate tissue.
- Sequences expressed at least three-fold higher in five of five prostate stage T2NO tumors, when compared with the average expression level in normal prostate tissue.
- Sequences expressed at least ten-fold higher in at least one of five  
15       prostate stage T2NO tumors, when compared with the average expression level in BPH.
- Sequences expressed at least five-fold higher in at least three of five prostate stage T2NO tumors, when compared with the average expression level in BPH.
- 20       • Sequences expressed at least three-fold higher in five of five prostate stage T2NO tumors, when compared with the average expression level in BPH.

Table 1-5 shows sequences which meet at least one of the following three criteria:

- 25       • Sequences found in Table 1-4 which show overexpression relative to both normal prostate and BPH.
- Sequences found in Table 1-4 which show evidence of a prostate restricted tissue distribution. An estimate of the tissue distribution for specific ESTs was made through the use of sequence clustering software.
- 30       Both the UniGene clustering of the dbEST database and Pangea clustering of sequence databases were used. The tissue of origin for each of the ESTs comprising a cluster was collected. Clusters were identified which met the

criteria of at least five ESTs in the cluster, and with at least 75% of the ESTs from prostate libraries.

- Sequences found in Table 1-4 which show evidence of a translation product with a membrane bound or secreted sub-cellular location based on the partition of the corresponding mRNA with membrane bound polysomes.

Table 2-1 shows sequences expressed at least three-fold higher in at least two of the six prostate stage T3NO tumors or at least five-fold higher in at least one of the six prostate stage T3NO tumors, when compared with the average expression levels of four BPH tissue specimens.

Table 2-2 shows sequences from Table 2-1 which are overexpressed by at least three-fold in three or more of six T3NO tumors or at least five-fold in two or more of six T3NO tumors, relative to BPH. Sequences that show restricted prostate tissue distribution or show evidence of a translational product with a membrane bound or secreted sub-cellular localization based on the partitioning of the corresponding mRNA with membrane bound polysomes, are preferred.

Table 2-3 shows sequences from Table 2-1 which are at least five-fold overexpressed in at least three of six T3NO tumors or at least ten-fold overexpressed in at least two of six T3NO tumors relative to BPH. Sequences that show restricted prostate tissue distribution or show evidence of a translational product with a membrane bound or secreted sub-cellular localization based on the partitioning of the corresponding mRNA with membrane bound polysomes, are preferred.

Tables 2-4, 2-5 and 2-6 show the expression levels for sequences in T2NO and T3NO tumors with poor clinical outcome. These are compared with the average expression levels of sequences from T2NO tumors with good clinical outcome. "Good clinical outcome" is defined as the patient remaining disease free for at least five years or more following surgery. "Poor clinical outcome" is defined as the patient suffering disease recurrence following surgery within a period of less than five years.

The sequences included in Table 2-4 are expressed at least three-fold higher in any one of four poor clinical outcome tumors compared to the mean expression in five good clinical outcome tumors.



Table 2-5 shows sequences from Table 2-4 which showed at least three-fold higher expression in at least two of four poor clinical outcome tumors compared to the average expression in five good clinical outcome tumors.

Table 2-6 shows sequences from Table 2-4 which showed at least five-fold  
5 higher expression in at least two of four poor clinical outcome tumors compared to the average expression in five good clinical outcome tumors. Some sequences in this Table show a restricted prostate distribution.

Tables 2-7, 2-8 and 2-9 show the expression levels for sequences in T2NO tumors with good clinical outcome. These are compared to the average expression  
10 levels of sequences from T2NO and T3NO tumors with poor clinical outcome.

Table 2-7 shows sequences which showed at least three-fold higher expression in at least one of five good clinical outcome tumors when compared with the average expression of four poor clinical outcome tumors.

Table 2-8 shows sequences from Table 2-7 which showed at least three-fold  
15 higher expression in at least two of five good clinical outcome tumors compared to the average expression in four poor clinical outcome tumors.

Table 2-9 shows sequences from Table 2-7 which showed at least five-fold higher expression in at least two of five good clinical outcome tumors compared to the average expression in four poor clinical outcome tumors. Some sequences in Table 2-9  
20 also show a restricted prostate tissue distribution.

Tables 2-10, 2-11 and 2-12 show the expression levels for sequences in the prostate tumor cell lines DU145, LNCaP and PC3. These are compared to the expression levels of sequences from the normal prostate epithelial cell strain, PrEC.

Table 2-10 shows sequences expressed at least three-fold higher in three of three,  
25 five-fold higher in at least two of three, or ten-fold higher in at least one of three prostate cancer cell lines relative to the expression in the normal PrEC cell strain.

Table 2-11 shows sequences from Table 2-10 which are expressed at least five-fold higher in at least two of the prostate cancer cell lines relative to the expression in the normal PrEC cell strain.

30 Table 2-12 shows sequences from Table 2-10 which are expressed at least ten-fold higher in at least two of the prostate cancer cell lines relative to the expression in the normal PrEC cell strain.

Table 3-1 shows 7511 nucleotide sequences that were identified through subtracted library experiments described herein. Table 3-2 includes sequences for the markers of Table 3-1 which are found in non-public databases (*e.g.*, PREPATNUC).

5 Table 3-3 shows 2543 nucleotide sequences that were identified through subtracted library experiments described herein. Table 3-4 includes sequences for the markers of Table 3-3 which are found in non-public databases (*e.g.*, PREPATNUC).

Table 3-5 shows 5857 nucleotide sequences that encode secreted proteins and were identified through subtracted library experiments described herein. Table 3-6 includes sequences for the markers of Table 3-5 which are found in non-public databases  
10 (*e.g.*, PREPATNUC).

Table 4-1 shows 7653 nucleotide sequences that were identified through subtracted library experiments described herein. Table 4-2 includes sequences for the markers of Table 4-1 which are found in non-public databases (*e.g.*, PREPATNUC).

Tables 5-1 and 5-2 show 116 and 123 nucleotide sequences (respectively) that  
15 were identified through transcriptional profiling experiments described herein. The nucleotide sequences were expressed in androgen-independent prostate tumors at levels that are 10-fold or greater than the levels of the same nucleotide sequence in androgen-dependant prostate tumors. Comparisons were made at 0, 7, and 14 days of androgen deprivation (*e.g.*, castration).

20 Table 6 shows the accession number ("Acc. No.") and corresponding GenBank GI number ("GI Number") for the markers of the present invention. One skilled in the art may thus obtain from the Tables of the invention, both GenBank accession number as well as the GenBank GI number for a marker of the present invention, thereby identifying the nucleotide and/or polypeptide sequence of that marker.

25 Any marker or combination of markers listed within Tables 1-1 to 6, as well as any known markers in combination with the markers set forth within Tables 1-1 to 6, may be used in the compositions, kits, and methods of the present invention. In general, it is preferable to use markers for which the difference between the level of expression of the marker in prostate cancer cells or prostate-associated body fluids and the level of  
30 expression of the same marker in normal prostate cells or prostate-associated body fluids is as great as possible. Although this difference can be as small as the limit of detection

of the method for assessing expression of the marker, it is preferred that the difference be at least greater than the standard error of the assessment method, and preferably a difference of at least 2-, 3-, 4-, 5-, 6-, 7-, 8-, 9-, 10-, 15-, 20-, 25-, 100-, 500-, 1000-fold or greater.

5           It will be appreciated that patient samples containing prostate cells may be used in the methods of the present invention. In these embodiments, the level of expression of the marker can be assessed by assessing the amount (*e.g.* absolute amount or concentration) of the marker in a prostate cell sample, *e.g.*, prostate tissue sample obtained from a patient. The cell sample can, of course, be subjected to a variety of  
10 well-known post-collection preparative and storage techniques (*e.g.* fixation, storage, freezing, lysis, homogenization, DNA or RNA extraction, ultrafiltration, concentration, evaporation, centrifugation, etc.) prior to assessing the amount of the marker in the sample.

          It will also be appreciated that certain markers correspond to proteins which are  
15 secreted from prostate cells (*i.e.* one or both of normal and cancerous cells) to the extracellular space surrounding the cells. These markers are preferably used in certain embodiments of the compositions, kits, and methods of the invention, owing to the fact that the protein corresponding to each of these markers can be detected in a prostate-associated body fluid sample. In addition, preferred *in vivo* techniques for detection of a  
20 protein corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the protein. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

          Although not every marker corresponding to a secreted protein is indicated as  
25 such herein, it is a simple matter for the skilled artisan to determine whether any particular marker corresponds to a secreted protein. In order to make this determination, the protein corresponding to a marker is expressed in a test cell (*e.g.* a cell of a prostate cell line), extracellular fluid is collected, and the presence or absence of the protein in the extracellular fluid is assessed (*e.g.* using a labeled antibody which  
30 binds specifically with the protein).

The following is an example of a method which can be used to detect secretion of a protein corresponding to a marker of the invention. About  $8 \times 10^5$  293T cells are incubated at 37°C in wells containing growth medium (Dulbecco's modified Eagle's medium {DMEM} supplemented with 10% fetal bovine serum) under a 5% (v/v) CO<sub>2</sub>, 95% air atmosphere to about 60-70% confluence. The cells are then transfected using a standard transfection mixture comprising 2 micrograms of DNA comprising an expression vector encoding the protein and 10 microliters of LipofectAMINE™ (GIBCO/BRL Catalog no. 18342-012) per well. The transfection mixture is maintained for about 5 hours, and then replaced with fresh growth medium and maintained in an air atmosphere. Each well is gently rinsed twice with DMEM which does not contain methionine or cysteine (DMEM-MC; ICN Catalog no. 16-424-54). About 1 milliliter of DMEM-MC and about 50 microcuries of Trans-<sup>35</sup>S™ reagent (ICN Catalog no. 51006) are added to each well. The wells are maintained under the 5% CO<sub>2</sub> atmosphere described above and incubated at 37°C for a selected period. Following incubation, 150 microliters of conditioned medium is removed and centrifuged to remove floating cells and debris. The presence of the protein in the supernatant is an indication that the protein is secreted.

Examples of prostate-associated body fluids include blood fluids (*e.g.* whole blood, blood serum, blood having platelets removed therefrom, lymph, urine, prostatic fluid and semen. Many prostate-associated body fluids (*i.e.* usually excluding urine) can have prostate cells therein, particularly when the prostate cells are cancerous, and, more particularly, when the prostate cancer is metastasizing. Cell-containing fluids which can contain prostate cancer cells include, but are not limited to, whole blood, blood having platelets removed therefrom, lymph, prostatic fluid, and semen. Thus, the compositions, kits, and methods of the invention can be used to detect expression of markers corresponding to proteins having at least one portion which is displayed on the surface of cells which express it. Although the proteins having at least one cell-surface portion are not set forth herein, it is a simple matter for the skilled artisan to determine whether the protein corresponding to any particular marker comprises a cell-surface protein. For example, immunological methods may be used to detect such proteins on whole cells, or well known computer-based sequence analysis methods (*e.g.* the SIGNALP program; Nielsen *et al.*, 1997, *Protein Engineering* 10:1-6) may be used to predict the presence of

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at least one extracellular domain (*i.e.* including both secreted proteins and proteins having at least one cell-surface domain). Expression of a marker corresponding to a protein having at least one portion which is displayed on the surface of a cell which expresses it may be detected without necessarily lysing the cell (*e.g.* using a labeled  
5 antibody which binds specifically with a cell-surface domain of the protein).

Expression of a marker of the invention may be assessed by any of a wide variety of well known methods for detecting expression of a transcribed molecule or protein. Non-limiting examples of such methods include immunological methods for detection of secreted, cell-surface, cytoplasmic, or nuclear proteins, protein purification methods,  
10 protein function or activity assays, nucleic acid hybridization methods, nucleic acid reverse transcription methods, and nucleic acid amplification methods.

In another preferred embodiment, expression of a marker is assessed using an antibody (*e.g.* a radio-labeled, chromophore-labeled, fluorophore-labeled, or enzyme-labeled antibody), an antibody derivative (*e.g.* an antibody conjugated with a substrate or  
15 with the protein or ligand of a protein-ligand pair {*e.g.* biotin-streptavidin} ), or an antibody fragment (*e.g.* a single-chain antibody, an isolated antibody hypervariable domain, etc.) which binds specifically with a protein or protein fragment corresponding to the marker, such as the protein encoded by the open reading frame corresponding to the marker or such a protein which has undergone all or a portion of its normal post-  
20 translational modification.

In another preferred embodiment, expression of a marker is assessed by preparing mRNA/cDNA (*i.e.* a transcribed polynucleotide) from cells in a patient sample, and by hybridizing the mRNA/cDNA with a reference polynucleotide which is a complement of a polynucleotide comprising the marker, and fragments thereof. cDNA  
25 can, optionally, be amplified using any of a variety of polymerase chain reaction methods prior to hybridization with the reference polynucleotide. Expression of one or more markers can likewise be detected using quantitative PCR to assess the level of expression of the marker(s). Alternatively, any of the many known methods of detecting mutations or variants (*e.g.* single nucleotide polymorphisms, deletions, etc.) of a marker  
30 of the invention may be used to detect occurrence of a marker in a patient.

In a related embodiment, a mixture of transcribed polynucleotides obtained from the sample is contacted with a substrate having fixed thereto a polynucleotide complementary to or homologous with at least a portion (*e.g.* at least 7, 10, 15, 20, 25, 30, 40, 50, 100, 500, or more nucleotide residues) of a marker of the invention. If  
5 polynucleotides complementary to or homologous with a marker of the invention are differentially detectable on the substrate (*e.g.* detectable using radioactivity, different chromophores or fluorophores), are fixed to different selected positions, then the levels of expression of a plurality of markers can be assessed simultaneously using a single substrate (*e.g.* a "gene chip" microarray of polynucleotides fixed at selected positions).  
10 When a method of assessing marker expression is used which involves hybridization of one nucleic acid with another, it is preferred that the hybridization be performed under stringent hybridization conditions.

Because the compositions, kits, and methods of the invention rely on detection of a difference in expression levels of one or more markers of the invention, it is preferable  
15 that the level of expression of the marker is significantly greater than the minimum detection limit of the method used to assess expression in at least one of normal prostate cells and cancerous prostate cells.

It is understood that by routine screening of additional patient samples using one or more of the markers of the invention, it will be realized that certain of the markers are  
20 over- or underexpressed in cancers of various types, including specific prostate cancers, as well as other cancers such as ovarian cancers. For example, it will be confirmed that some of the markers of the invention are over-expressed in most (*i.e.* 50% or more) or substantially all (*i.e.* 80% or more) of prostate cancer. Furthermore, it will be confirmed that certain of the markers of the invention are associated with prostate cancer of various  
25 stages.

It will be appreciated that as a greater number of patient samples are assessed for expression of the markers of the invention and the outcomes of the individual patients from whom the samples were obtained are correlated, it will also be confirmed that altered expression of certain of the markers of the invention are strongly correlated with  
30 malignant cancers and that altered expression of other markers of the invention are strongly correlated with benign tumors. The compositions, kits, and methods of the invention are thus useful for characterizing one or more of the stage, grade, histological

type, metastatic potential, indolent vs. aggressive phenotype and benign/malignant nature of prostate cancer in patients.

When the compositions, kits, and methods of the invention are used for characterizing one or more of the stage, grade, histological type, metastatic potential, indolent vs. aggressive phenotype and benign/malignant nature of prostate cancer in a patient, it is preferred that the marker or panel of markers of the invention is selected such that a positive result is obtained in at least about 20%, and preferably at least about 40%, 60%, or 80%, and more preferably in substantially all patients afflicted with a prostate cancer of the corresponding stage, grade, histological type, metastatic potential, indolent vs. aggressive phenotype or benign/malignant nature. Preferably, the marker or panel of markers of the invention is selected such that a positive predictive value (PPV) of greater than about 10% is obtained for the general population.

When a plurality of markers of the invention are used in the compositions, kits, and methods of the invention, the level of expression of each marker in a patient sample can be compared with the normal level of expression of each of the plurality of markers in non-cancerous samples of the same type, either in a single reaction mixture (*i.e.* using reagents, such as different fluorescent probes, for each marker or a mixture of similarly labeled probes to access a plurality of markers that are fixed to a single substrate at different positions) or in individual reaction mixtures corresponding to one or more of the markers. In one embodiment, a significantly enhanced level of expression of more than one of the plurality of markers in the sample, relative to the corresponding normal levels, is an indication that the patient is afflicted with prostate cancer. When a plurality of markers is used, it is preferred that 2, 3, 4, 5, 8, 10, 12, 15, 20, 30, or 50 or more individual markers be used, wherein fewer markers are preferred.

In order to maximize the sensitivity of the compositions, kits, and methods of the invention (*i.e.* by interference attributable to cells of non-prostate origin in a patient sample), it is preferable that the marker of the invention used therein be a marker which has a restricted tissue distribution, *e.g.*, normally not expressed in non-prostate tissue.

Only a small number of markers are known to be associated with prostate cancers (*e.g.* PSA, PSMA, PAP, PCA3, PCTA-1, PSCA and STEAP). These markers are not, of course, included among the markers of the invention, although they may be used together with one or more markers of the invention in a panel of markers, for

example. It is well known that certain types of genes, such as oncogenes, tumor suppressor genes, growth factor-like genes, protease-like genes, and protein kinase-like genes are often involved with development of cancers of various types. Thus, among the markers of the invention, use of those which correspond to proteins which resemble  
 5 known proteins encoded by known oncogenes and tumor suppressor genes, and those which correspond to proteins which resemble growth factors, proteases, and protein kinases are preferred.

Known oncogenes and tumor suppressor genes include, for example, *abl*, *abr*, *akT2NO*, *apc*, *bcl2 $\alpha$* , *bcl2 $\beta$* , *bcl3*, *bcrl*, *brca1*, *brca2*, *cbl*, *ccnd1*, *cdc42*, *cdk4*, *crk- II*,  
 10 *csflr/fms*, *db1*, *dcc*, *dpc4/smad4*, *e-cad*, *e2f1/rbap*, *egfr/erbB-1*, *elk1*, *elk3*, *epb*, *erg*, *ets1*, *ets2*, *fer*, *fgr/src2*, *flil/ergb2*, *fos*, *fps/fes*, *fra1*, *fra2*, *fyn*, *hck*, *hek*, *her2/erbB- 2/neu*, *her3/erbB-3*, *her4/erbB-4*, *hras1*, *hsT2NO*, *hstf1*, *igfbp2*, *ink4a*, *ink4b*, *inT2NO/fgf3*, *jun*, *junb*, *jund*, *kip2*, *kit*, *kras2a*, *kras2b*, *lck*, *lyn*, *mas*, *max*, *mcc*, *mdm2*, *met*, *mlh1*, *mmp10*, *mos*, *msh2*, *msh3*, *msh6*, *myb*, *myba*, *mybb*, *myc*, *mycl1*, *mycn*, *nfl*, *nf2*, *nme2*, *nras*, *p53*,  
 15 *pdgfb*, *phb*, *pim1*, *pms1*, *pms2*, *ptc*, *pten*, *raf1*, *rap1a*, *rb1*, *rel*, *ret*, *ros1*, *ski*, *src1*, *tall*, *tgfb2*, *tgfb3*, *tgfb3*, *thral*, *thrb*, *tiam1*, *timp3*, *tjpl*, *tp53*, *trk*, *vav*, *vhl*, *vil2*, *waf1*, *wnt1*, *wnT2NO*, *wt1*, and *yes1* (Hesketh, 1997, In: *The Oncogene and Tumour Suppressor Gene Facts Book*, 2nd Ed., Academic Press; Fishel *et al.*, 1994, *Science* 266:1403-1405).

Known growth factors include platelet-derived growth factor alpha, platelet-  
 20 derived growth factor beta (simian sarcoma viral {v-sis} oncogene homolog), thrombopoietin (myeloproliferative leukemia virus oncogene ligand, megakaryocyte growth and development factor), erythropoietin, B cell growth factor, macrophage stimulating factor 1 (hepatocyte growth factor-like protein), hepatocyte growth factor (hepapoietin A), insulin-like growth factor 1 (somatomedia C), hepatoma-derived  
 25 growth factor, amphiregulin (schwannoma-derived growth factor), bone morphogenetic proteins 1, 2, 3, 3 beta, and 4, bone morphogenetic protein 7 (osteogenic protein 1), bone morphogenetic protein 8 (osteogenic protein 2), connective tissue growth factor, connective tissue activation peptide 3, epidermal growth factor (EGF), teratocarcinoma-derived growth factor 1, endothelin, endothelin 2, endothelin 3, stromal cell-derived  
 30 factor 1, vascular endothelial growth factor (VEGF), VEGF-B, VEGF-C, placental growth factor (vascular endothelial growth factor-related protein), transforming growth factor alpha, transforming growth factor beta 1 and its precursors, transforming growth



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factor beta 2 and its precursors, fibroblast growth factor 1 (acidic), fibroblast growth factor 2 (basic), fibroblast growth factor 5 and its precursors, fibroblast growth factor 6 and its precursors, fibroblast growth factor 7 (keratinocyte growth factor), fibroblast growth factor 8 (androgen-induced), fibroblast growth factor 9 (glia-activating factor),  
 5 pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1), brain-derived neurotrophic factor, and recombinant glial growth factor 2.

Known proteases include interleukin-1 beta convertase and its precursors, Mch6 and its precursors, Mch2 isoform alpha, Mch4, Cpp32 isoform alpha, Lice2 gamma cysteine protease, Ich-1S, Ich-1L, Ich-2 and its precursors, TY protease, matrix  
 10 metalloproteinase 1 (interstitial collagenase), matrix metalloproteinase 2 (gelatinase A, 72kD gelatinase, 72kD type IV collagenase), matrix metalloproteinase 7 (matrilysin), matrix metalloproteinase 8 (neutrophil collagenase), matrix metalloproteinase 12 (macrophage elastase), matrix metalloproteinase 13 (collagenase 3), metalloproteinase 1, cysteine-rich metalloproteinase (disintegrin) and its precursors, subtilisin-like protease Pc8  
 15 and its precursors, chymotrypsin, snake venom-like protease, cathepsin I, cathepsin D (lysosomal aspartyl protease), stromelysin, aminopeptidase N, plasminogen, tissue plasminogen activator, plasminogen activator inhibitor type II, and urokinase-type plasminogen activator.

Known protein kinases include DAP kinase, serine/threonine protein kinases  
 20 NIK, PK428, Krs-2, SAK, and EMK, interferon-inducible double stranded RNA dependent protein kinase, FAST kinase, AIM1, IPL1-like midbody-associated protein kinase-1, NIMA-like protein kinase 1 (NLK1), the cyclin-dependent kinases (cdk1-10), checkpoint kinase Chk1, Nek3 protein kinase, BMK1 beta kinase, Clk1, Clk2, Clk3, extracellular signal-regulated kinases 1, 3, and 6, cdc28 protein kinase 1, cdc28 protein  
 25 kinase 2, pLK, Myt1, c-Jun N-terminal kinase 2, Cam kinase 1, the MAP kinases, insulin-stimulated protein kinase 1, beta-adrenergic receptor kinase 2, ribosomal protein S6 kinase, kinase suppressor of ras-1 (KSR1), putative serine/threonine protein kinase Prk, Pkb kinase, cAMP-dependent protein kinase, cGMP-dependent protein kinase, type II cGMP-dependent protein kinase, protein kinases Dyrk2, Dyrk3, and Dyrk4, Rho-  
 30 associated coiled-coil containing protein kinase p160ROCK, protein tyrosine kinase t-Ror1, Ste20-related kinases, cell adhesion kinase beta, protein kinase 3, stress-activated protein kinase 4, protein kinase Zpk, serine kinase hPAK65, dual specificity mitogen-

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activated protein kinases 1 and 2, casein kinase I gamma 2, p21-activated protein kinase Pak1, lipid-activated protein kinase PRK2, focal adhesion kinase, dual-specificity tyrosine-phosphorylation regulated kinase, myosin light chain kinase, serine kinases SRPK2, TESK1, and VRK2, B lymphocyte serine/threonine protein kinase, stress-  
5 activated protein kinases JNK1 and JNK2, phosphorylase kinase, protein tyrosine kinase Tec, Jak2 kinase, protein kinase Ndr, MEK kinase 3, SHB adaptor protein (a Src homology 2 protein), agammaglobulinaemia protein-tyrosine kinase (Atk), protein kinase ATR, guanylate kinase 1, thrombopoietin receptor and its precursors, DAG kinase epsilon, and kinases encoded by oncogenes or viral oncogenes such as v-fgr  
10 (Gardner-Rasheed), v-abl (Abelson murine leukemia viral oncogene homolog 1), v-arg (Abelson murine leukemia viral oncogene homolog, Abelson-related gene), v-fes and v-fps (feline sarcoma viral oncogene and Fujinami avian sarcoma viral oncogene homologs), proto-oncogene *c-cot*, oncogene *pim-1*, and oncogene *mas1*.

It is recognized that the compositions, kits, and methods of the invention will be  
15 of particular utility to patients having an enhanced risk of developing prostate cancer and their medical advisors. Patients recognized as having an enhanced risk of developing prostate cancer include, for example, patients having a familial history of prostate cancer, patients identified as having a mutant oncogene (*i.e.* at least one allele), and patients determined through any other established medical criteria to be at risk for cancer  
20 or other malignancy.

The level of expression of a marker in normal (*i.e.* non-cancerous) human prostate tissue can be assessed in a variety of ways. In one embodiment, this normal level of expression is assessed by assessing the level of expression of the marker in a portion of prostate cells which appears to be non-cancerous and by comparing this  
25 normal level of expression with the level of expression in a portion of the prostate cells which is suspected of being cancerous. For example, the normal level of expression of a marker may be assessed using a non-affected portion of the prostate and this normal level of expression may be compared with the level of expression of the same marker in an affected portion of the prostate. Alternately, and particularly as further information  
30 becomes available as a result of routine performance of the methods described herein, population-average values for normal expression of the markers of the invention may be used. In other embodiments, the 'normal' level of expression of a marker may be

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determined by assessing expression of the marker in a patient sample obtained from a non-cancer-afflicted patient, from a patient sample obtained from a patient before the suspected onset of prostate cancer in the patient, from archived patient samples, and the like.

5           The invention includes compositions, kits, and methods for assessing the presence of prostate cancer cells in a sample (*e.g.* an archived tissue sample or a sample obtained from a patient). These compositions, kits, and methods are substantially the same as those described above, except that, where necessary, the compositions, kits, and methods are adapted for use with samples other than patient samples. For example,  
10   when the sample to be used is a paraffinized, archived human tissue sample, it can be necessary to adjust the ratio of compounds in the compositions of the invention, in the kits of the invention, or the methods used to assess levels of marker expression in the sample. Such methods are well known in the art and within the skill of the ordinary artisan.

15           The invention includes a kit for assessing the presence of prostate cancer cells (*e.g.* in a sample such as a patient sample). The kit comprises a plurality of reagents, each of which is capable of binding specifically with a nucleic acid or polypeptide corresponding to a marker of the invention. Suitable reagents for binding with a polypeptide corresponding to a marker of the invention include antibodies, antibody  
20   derivatives, antibody fragments, and the like. Suitable reagents for binding with a nucleic acid (*e.g.* a genomic DNA, an mRNA, a spliced mRNA, a cDNA, or the like) include complementary nucleic acids. For example, the nucleic acid reagents may include oligonucleotides (labeled or non-labeled) fixed to a substrate, labeled oligonucleotides not bound with a substrate, pairs of PCR primers, molecular beacon  
25   probes, and the like.

          The kit of the invention may optionally comprise additional components useful for performing the methods of the invention. By way of example, the kit may comprise fluids (*e.g.* SSC buffer) suitable for annealing complementary nucleic acids or for binding an antibody with a protein with which it specifically binds, one or more sample  
30   compartments, an instructional material which describes performance of a method of the invention, a sample of normal prostate cells, a sample of prostate cancer cells, and the like.

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The invention also includes a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with prostate cancer. In this method, a protein or protein fragment corresponding to a marker of the invention is isolated (*e.g.* by purification from a cell in which it is expressed or by  
5 transcription and translation of a nucleic acid encoding the protein *in vivo* or *in vitro* using known methods). A vertebrate, preferably a mammal such as a mouse, rat, rabbit, or sheep, is immunized using the isolated protein or protein fragment. The vertebrate may optionally (and preferably) be immunized at least one additional time with the isolated protein or protein fragment, so that the vertebrate exhibits a robust immune  
10 response to the protein or protein fragment. Splenocytes are isolated from the immunized vertebrate and fused with an immortalized cell line to form hybridomas, using any of a variety of methods well known in the art. Hybridomas formed in this manner are then screened using standard methods to identify one or more hybridomas which produce an antibody which specifically binds with the protein or protein  
15 fragment. The invention also includes hybridomas made by this method and antibodies made using such hybridomas.

The invention also includes a method of assessing the efficacy of a test compound for inhibiting prostate cancer cells. As described above, differences in the level of expression of the markers of the invention correlate with the cancerous state of  
20 prostate cells. Although it is recognized that changes in the levels of expression of certain of the markers of the invention likely result from the cancerous state of prostate cells, it is likewise recognized that changes in the levels of expression of other of the markers of the invention induce, maintain, and promote the cancerous state of those cells. Thus, compounds which inhibit prostate cancer in a patient will cause the level of  
25 expression of one or more of the markers of the invention to change to a level nearer the normal level of expression for that marker (*i.e.* the level of expression for the marker in non-cancerous prostate cells).

This method thus comprises comparing expression of a marker in a first prostate cell sample and maintained in the presence of the test compound and expression of the  
30 marker in a second prostate cell sample and maintained in the absence of the test compound. A significant altered level of expression of a marker listed within Tables 1-1 to 6 is an indication that the test compound inhibits prostate cancer. The prostate cell

samples may, for example, be aliquots of a single sample of normal prostate cells obtained from a patient, pooled samples of normal prostate cells obtained from a patient, cells of a normal prostate cell line, aliquots of a single sample of prostate cancer cells obtained from a patient, pooled samples of prostate cancer cells obtained from a patient, 5 cells of a prostate cancer cell line, or the like. In one embodiment, the samples are prostate cancer cells obtained from a patient and a plurality of compounds known to be effective for inhibiting various prostate cancers are tested in order to identify the compound which is likely to best inhibit the prostate cancer in the patient.

This method may likewise be used to assess the efficacy of a therapy for 10 inhibiting prostate cancer in a patient. In this method, the level of expression of one or more markers of the invention in a pair of samples (one subjected to the therapy, the other not subjected to the therapy) is assessed. As with the method of assessing the efficacy of test compounds, if the therapy induces a significant alteration in the level of expression of a marker listed within Tables 1-1 to 6 then the therapy is efficacious for 15 inhibiting prostate cancer. As above, if samples from a selected patient are used in this method, then alternative therapies can be assessed *in vitro* in order to select a therapy most likely to be efficacious for inhibiting prostate cancer in the patient.

As described herein, prostate cancer in patients is associated with an altered level of expression of one or more markers listed within Tables 1-1 to 6. While, as discussed 20 above, some of these changes in expression level result from occurrence of the prostate cancer, others of these changes induce, maintain, and promote the cancerous state of prostate cancer cells. Thus, prostate cancer characterized by an altered the level of expression of one or more markers listed within Tables 1-1 to 6 can be controlled or suppressed by altering expression of those markers.

25 Expression of a marker listed within Tables 1-1 to 6 can be inhibited in a number of ways generally known in the art. For example, an antisense oligonucleotide can be provided to the prostate cancer cells in order to inhibit transcription, translation, or both, of the marker(s). Alternately, a polynucleotide encoding an antibody, an antibody derivative, or an antibody fragment, and operably linked with an appropriate 30 promoter/regulator region, can be provided to the cell in order to generate intracellular antibodies which will inhibit the function or activity of the protein corresponding to the marker(s). Using the methods described herein, a variety of molecules, particularly

including molecules sufficiently small that they are able to cross the cell membrane, can be screened in order to identify molecules which inhibit expression of the marker(s). The compound so identified can be provided to the patient in order to inhibit expression of the marker(s) in the prostate cancer cells of the patient.

5           Expression of a marker listed in within Tables 1-1 to 6 can be enhanced in a number of ways generally known in the art. For example, a polynucleotide encoding the marker and operably linked with an appropriate promoter/regulator region can be provided to prostate cancer cells of the patient in order to induce enhanced expression of the protein (and mRNA) corresponding to the marker therein. Alternatively, if the  
10   protein is capable of crossing the cell membrane, inserting itself in the cell membrane, or is normally a secreted protein, then expression of the protein can be enhanced by providing the protein (e.g. directly or by way of the bloodstream or another prostate-associated fluid) to prostate cancer cells in the patient.

As described above, the cancerous state of human prostate cells is correlated with  
15   changes in the levels of expression of the markers of the invention. Thus, compounds which alter expression of one or more of the markers listed in within Tables 1-1 to 6 can induce prostate cell carcinogenesis. The invention thus includes a method for assessing the human prostate cell carcinogenic potential of a test compound. This method comprises maintaining separate aliquots of human prostate cells in the presence and  
20   absence of the test compound. Expression of a marker of the invention in each of the aliquots is compared. A significant alteration in the level of expression of a marker listed within Tables 1-1 to 6 in the aliquot maintained in the presence of the test compound (relative to the aliquot maintained in the absence of the test compound) is an indication that the test compound possesses human prostate cell carcinogenic potential.  
25   The relative carcinogenic potentials of various test compounds can be assessed by comparing the degree of enhancement or inhibition of the level of expression of the relevant markers, by comparing the number of markers for which the level of expression is enhanced or inhibited, or by comparing both.

Various aspects of the invention are described in further detail in the following  
30   subsections.

### I. Isolated Nucleic Acid Molecules

One aspect of the invention pertains to isolated nucleic acid molecules that correspond to a marker of the invention, including nucleic acids which encode a polypeptide corresponding to a marker of the invention or a portion of such a polypeptide. Isolated nucleic acids of the invention also include nucleic acid molecules sufficient for use as hybridization probes to identify nucleic acid molecules that correspond to a marker of the invention, including nucleic acids which encode a polypeptide corresponding to a marker of the invention, and fragments of such nucleic acid molecules, *e.g.*, those suitable for use as PCR primers for the amplification or mutation of nucleic acid molecules. As used herein, the term "nucleic acid molecule" is intended to include DNA molecules (*e.g.*, cDNA or genomic DNA) and RNA molecules (*e.g.*, mRNA) and analogs of the DNA or RNA generated using nucleotide analogs. The nucleic acid molecule can be single-stranded or double-stranded, but preferably is double-stranded DNA.

An "isolated" nucleic acid molecule is one which is separated from other nucleic acid molecules which are present in the natural source of the nucleic acid molecule. Preferably, an "isolated" nucleic acid molecule is free of sequences (preferably protein-encoding sequences) which naturally flank the nucleic acid (*i.e.*, sequences located at the 5' and 3' ends of the nucleic acid) in the genomic DNA of the organism from which the nucleic acid is derived. For example, in various embodiments, the isolated nucleic acid molecule can contain less than about 5 kB, 4 kB, 3 kB, 2 kB, 1 kB, 0.5 kB or 0.1 kB of nucleotide sequences which naturally flank the nucleic acid molecule in genomic DNA of the cell from which the nucleic acid is derived. Moreover, an "isolated" nucleic acid molecule, such as a cDNA molecule, can be substantially free of other cellular material, or culture medium when produced by recombinant techniques, or substantially free of chemical precursors or other chemicals when chemically synthesized.

A nucleic acid molecule of the present invention, *e.g.*, a nucleic acid encoding a protein corresponding to a marker listed in one or more of Tables 1-1 to 6, can be isolated using standard molecular biology techniques and the sequence information in the database records described herein. Using all or a portion of such nucleic acid sequences, nucleic acid molecules of the invention can be isolated using standard hybridization and cloning techniques (*e.g.*, as described in Sambrook *et al.*, ed.,

*Molecular Cloning: A Laboratory Manual, 2nd ed.*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989).

A process for identifying a larger fragment or the full-length coding sequence of a marker of the present invention is thus also provided. Any conventional recombinant  
5 DNA techniques applicable for isolating polynucleotides may be employed. One such method involves the 5'-RACE-PCR technique, in which the poly-A mRNA that contains the coding sequence of particular interest is first reverse transcribed with a 3'-primer comprising a sequence disclosed herein. The newly synthesized cDNA strand is then tagged with an anchor primer with a known sequence, which preferably contains a  
10 convenient cloning restriction site attached at the 5' end. The tagged cDNA is then amplified with the 3'-primer (or a nested primer sharing sequence homology to the internal sequences of the coding region) and the 5'-anchor primer. The amplification may be conducted under conditions of various levels of stringency to optimize the amplification specificity. 5'-RACE-PCR can be readily performed using commercial  
15 kits (available from, e.g., BRL Life Technologies Inc., Clontech) according to the manufacturer's instructions.

Isolating the complete coding sequence of a gene can also be carried out in a hybridization assay using a suitable probe. The probe preferably comprises at least 10 nucleotides, and more preferably exhibits sequence homology to the polynucleotides of  
20 the markers of the present invention. Other high throughput screens for cDNAs, such as those involving gene chip technology, can also be employed in obtaining the complete cDNA sequence.

In addition, databases exist that reduce the complexity of ESTs by assembling contiguous EST sequences into tentative genes. For example, TIGR has assembled  
25 human ESTs into a database called THC for tentative human consensus sequences. The THC database allows for a more definitive assignment compared to ESTs alone. Software programs exist (TIGR assembler and TIGEM EST assembly machine and contig assembly program (see Huang, X., 1996, *Genomes* 33:21-23)) that allow for assembling ESTs into contiguous sequences from any organism.

30 Alternatively, mRNA from a sample preparation is used to construct cDNA library in the ZAP Express vector following the procedure described in Velculescu *et al.*, 1997, *Science* 270:484. The ZAP Express cDNA synthesis kit (Stratagene) is used



accordingly to the manufacturer's protocol. Plates containing 250 to 2000 plaques are hybridized as described in Rupert *et al.*, 1988, *Mol. Cell. Bio.* 8:3104 to oligonucleotide probes with the same conditions previously described for standard probes except that the hybridization temperature is reduced to a room temperature. Washes are performed in  
5 6X standard-saline-citrate 0.1% SDS for 30 minutes at room temperature. The probes are labeled with  $^{32}\text{P}$ -ATP through use of T4 polynucleotide kinase.

A partial cDNA (3' fragment) can be isolated by 3' directed PCR reaction. This procedure is a modification of the protocol described in Polyak *et al.*, 1997, *Nature* 389:300. Briefly, the procedure uses SAGE tags in PCR reaction such that the resultant  
10 PCR product contains the SAGE tag of interest as well as additional cDNA, the length of which is defined by the position of the tag with respect to the 3' end of the cDNA. The cDNA product derived from such a transcript driven PCR reaction can be used for many applications.

RNA from a source to express the cDNA corresponding to a given tag is first  
15 converted to double-stranded cDNA using any standard cDNA protocol. Similar conditions used to generate cDNA for SAGE library construction can be employed except that a modified oligo-dT primer is used to derive the first strand synthesis. For example, the oligonucleotide of composition 5'-B-TCC GGC GCG CCG TTT TCC CAG TCA CGA(30)-3', contains a poly-T stretch at the 3' end for hybridization and  
20 priming from poly-A tails, an M13 priming site for use in subsequent PCR steps, a 5' Biotin label (B) for capture to streptavidin-coated magnetic beads, and an *Asc*I restriction endonuclease site for releasing the cDNA from the streptavidin-coated magnetic beads. Theoretically, any sufficiently-sized DNA region capable of hybridizing to a PCR primer can be used as well as any other 8 base pair recognizing endonuclease.

25 cDNA constructed utilizing this or similar modified oligo-dT primer is then processed as described in U.S. Patent No. 5,695,937 up until adapter ligation where only one adapter is ligated to the cDNA pool. After adapter ligation, the cDNA is released from the streptavidin-coated magnetic beads and is then used as a template for cDNA amplification.

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Various PCR protocols can be employed using PCR priming sites within the 3' modified oligo-dT primer and the SAGE tag. The SAGE tag-derived PCR primer employed can be of varying length dictated by 5' extension of the tag into the adaptor sequence. cDNA products are now available for a variety of applications.

5 This technique can be further modified by: (1) altering the length and/or content of the modified oligo-dT primer; (2) ligating adaptors other than that previously employed within the SAGE protocol; (3) performing PCR from template retained on the streptavidin-coated magnetic beads; and (4) priming first strand cDNA synthesis with non-oligo-dT based primers.

10 Gene trapper technology can also be used. The reagents and manufacturer's instructions for this technology are commercially available from Life Technologies, Inc., Gaithersburg, Maryland. Briefly, a complex population of single-stranded phagemid DNA containing directional cDNA inserts is enriched for the target sequence by hybridization in solution to a biotinylated oligonucleotide probe complementary to the target  
15 sequence. The hybrids are captured on streptavidin-coated paramagnetic beads. A magnet retrieves the paramagnetic beads from the solution, leaving nonhybridized single-stranded DNAs behind. Subsequently, the captured single-stranded DNA target is released from the biotinylated oligonucleotide. After release, the cDNA clone is further enriched by using a nonbiotinylated target oligonucleotide to specifically prime  
20 conversion of the single-stranded DNA. Following transformation and plating, typically 20% to 100% of the colonies represent the cDNA clone of interest. To identify the desired cDNA clone, the colonies may be screened by colony hybridization using the <sup>32</sup>P-labeled oligonucleotide, or alternatively by DNA sequencing and alignment of all sequences obtained from numerous clones to determine a consensus sequence.

25 A nucleic acid molecule of the invention can be amplified using cDNA, mRNA, or genomic DNA as a template and appropriate oligonucleotide primers according to standard PCR amplification techniques. The nucleic acid so amplified can be cloned into an appropriate vector and characterized by DNA sequence analysis. Furthermore, oligonucleotides corresponding to all or a portion of a nucleic acid molecule of the  
30 invention can be prepared by standard synthetic techniques, e.g., using an automated DNA synthesizer.

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In another preferred embodiment, an isolated nucleic acid molecule of the invention comprises a nucleic acid molecule which has a nucleotide sequence complementary to the nucleotide sequence of a nucleic acid corresponding to a marker of the invention or to the nucleotide sequence of a nucleic acid encoding a protein which corresponds to a marker of the invention. A nucleic acid molecule which is complementary to a given nucleotide sequence is one which is sufficiently complementary to the given nucleotide sequence that it can hybridize to the given nucleotide sequence thereby forming a stable duplex.

Moreover, a nucleic acid molecule of the invention can comprise only a portion of a nucleic acid sequence, wherein the full length nucleic acid sequence comprises a marker of the invention or which encodes a polypeptide corresponding to a marker of the invention. Such nucleic acids can be used, for example, as a probe or primer. The probe/primer typically is used as one or more substantially purified oligonucleotides. The oligonucleotide typically comprises a region of nucleotide sequence that hybridizes under stringent conditions to at least about 7, preferably about 15, more preferably about 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, or 400 or more consecutive nucleotides of a nucleic acid of the invention.

Probes based on the sequence of a nucleic acid molecule of the invention can be used to detect transcripts or genomic sequences corresponding to one or more markers of the invention. The probe comprises a label group attached thereto, *e.g.*, a radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor. Such probes can be used as part of a diagnostic test kit for identifying cells or tissues which mis-express the protein, such as by measuring levels of a nucleic acid molecule encoding the protein in a sample of cells from a subject, *e.g.*, detecting mRNA levels or determining whether a gene encoding the protein has been mutated or deleted.

The invention further encompasses nucleic acid molecules that differ, due to degeneracy of the genetic code, from the nucleotide sequence of nucleic acids encoding a protein which corresponds to a marker of the invention, and thus encode the same protein.

In addition to the nucleotide sequences described in the GenBank and IMAGE Consortium database records described herein, and in Table \_\_, it will be appreciated by those skilled in the art that DNA sequence polymorphisms that lead to changes in the

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amino acid sequence can exist within a population (e.g., the human population). Such genetic polymorphisms can exist among individuals within a population due to natural allelic variation. An allele is one of a group of genes which occur alternatively at a given genetic locus. In addition, it will be appreciated that DNA polymorphisms that affect RNA expression levels can also exist that may affect the overall expression level of that gene (e.g., by affecting regulation or degradation).

As used herein, the phrase "allelic variant" refers to a nucleotide sequence which occurs at a given locus or to a polypeptide encoded by the nucleotide sequence.

As used herein, the terms "gene" and "recombinant gene" refer to nucleic acid molecules comprising an open reading frame encoding a polypeptide corresponding to a marker of the invention. Such natural allelic variations can typically result in 1-5% variance in the nucleotide sequence of a given gene. Alternative alleles can be identified by sequencing the gene of interest in a number of different individuals. This can be readily carried out by using hybridization probes to identify the same genetic locus in a variety of individuals. Any and all such nucleotide variations and resulting amino acid polymorphisms or variations that are the result of natural allelic variation and that do not alter the functional activity are intended to be within the scope of the invention.

In another embodiment, an isolated nucleic acid molecule of the invention is at least 7, 15, 20, 25, 30, 40, 60, 80, 100, 150, 200, 250, 300, 350, 400, 450, 550, 650, 700, 800, 900, 1000, 1200, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3000, 3500, 4000, 4500, or more nucleotides in length and hybridizes under stringent conditions to a nucleic acid corresponding to a marker of the invention or to a nucleic acid encoding a protein corresponding to a marker of the invention. As used herein, the term "hybridizes under stringent conditions" is intended to describe conditions for hybridization and washing under which nucleotide sequences at least 75% (80%, 85%, preferably 90%) identical to each other typically remain hybridized to each other. Such stringent conditions are known to those skilled in the art and can be found in sections 6.3.1-6.3.6 of *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989). A preferred, non-limiting example of stringent hybridization conditions for annealing two single-stranded DNA each of which is at least about 100 bases in length and/or for annealing a single-stranded DNA and a single-stranded RNA each of which is at least about 100 bases in length, are hybridization in 6X sodium chloride/sodium citrate (SSC)

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at about 45°C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65°C. Further preferred hybridization conditions are taught in Lockhart, *et al.*, Nature Biotechnology, Volume 14, 1996 August:1675-1680; Breslauer, *et al.*, Proc. Natl. Acad. Sci. USA, Volume 83, 1986 June: 3746-3750; Van Ness, *et al.*, Nucleic Acids Research, 5 Volume 19, No. 19, 1991 September: 5143-5151; McGraw, *et al.*, BioTechniques, Volume 8, No. 6 1990: 674-678; and Milner, *et al.*, Nature Biotechnology, Volume 15, 1997 June: 537-541, all expressly incorporated by reference.

In addition to naturally-occurring allelic variants of a nucleic acid molecule of the invention that can exist in the population, the skilled artisan will further appreciate that sequence changes can be introduced by mutation thereby leading to changes in the amino acid sequence of the encoded protein, without altering the biological activity of the protein encoded thereby. For example, one can make nucleotide substitutions leading to amino acid substitutions at "non-essential" amino acid residues. A "non-essential" amino acid residue is a residue that can be altered from the wild-type sequence without altering the biological activity, whereas an "essential" amino acid residue is 15 required for biological activity. For example, amino acid residues that are not conserved or only semi-conserved among homologs of various species may be non-essential for activity and thus would be likely targets for alteration. Alternatively, amino acid residues that are conserved among the homologs of various species (*e.g.*, murine and 20 human) may be essential for activity and thus would not be likely targets for alteration.

Accordingly, another aspect of the invention pertains to nucleic acid molecules encoding a polypeptide of the invention that contain changes in amino acid residues that are not essential for activity. Such polypeptides differ in amino acid sequence from the naturally-occurring proteins which correspond to the markers of the invention, yet retain 25 biological activity. In one embodiment, such a protein has an amino acid sequence that is at least about 40% identical, 50%, 60%, 70%, 80%, 90%, 95%, or 98% identical to the amino acid sequence of one of the proteins which correspond to the markers of the invention.

An isolated nucleic acid molecule encoding a variant protein can be created by 30 introducing one or more nucleotide substitutions, additions or deletions into the nucleotide sequence of nucleic acids of the invention, such that one or more amino acid residue substitutions, additions, or deletions are introduced into the encoded protein.

Mutations can be introduced by standard techniques, such as site-directed mutagenesis and PCR-mediated mutagenesis. Preferably, conservative amino acid substitutions are made at one or more predicted non-essential amino acid residues. A "conservative amino acid substitution" is one in which the amino acid residue is replaced with an amino acid residue having a similar side chain. Families of amino acid residues having similar side chains have been defined in the art. These families include amino acids with basic side chains (*e.g.*, lysine, arginine, histidine), acidic side chains (*e.g.*, aspartic acid, glutamic acid), uncharged polar side chains (*e.g.*, glycine, asparagine, glutamine, serine, threonine, tyrosine, cysteine), non-polar side chains (*e.g.*, alanine, valine, leucine, isoleucine, proline, phenylalanine, methionine, tryptophan), beta-branched side chains (*e.g.*, threonine, valine, isoleucine) and aromatic side chains (*e.g.*, tyrosine, phenylalanine, tryptophan, histidine). Alternatively, mutations can be introduced randomly along all or part of the coding sequence, such as by saturation mutagenesis, and the resultant mutants can be screened for biological activity to identify mutants that retain activity. Following mutagenesis, the encoded protein can be expressed recombinantly and the activity of the protein can be determined.

The present invention encompasses antisense nucleic acid molecules, *i.e.*, molecules which are complementary to a sense nucleic acid of the invention, *e.g.*, complementary to the coding strand of a double-stranded cDNA molecule corresponding to a marker of the invention or complementary to an mRNA sequence corresponding to a marker of the invention. Accordingly, an antisense nucleic acid of the invention can hydrogen bond to (*i.e.* anneal with) a sense nucleic acid of the invention. The antisense nucleic acid can be complementary to an entire coding strand, or to only a portion thereof, *e.g.*, all or part of the protein coding region (or open reading frame). An antisense nucleic acid molecule can also be antisense to all or part of a non-coding region of the coding strand of a nucleotide sequence encoding a polypeptide of the invention. The non-coding regions ("5' and 3' untranslated regions") are the 5' and 3' sequences which flank the coding region and are not translated into amino acids.

An antisense oligonucleotide can be, for example, about 5, 10, 15, 20, 25, 30, 35, 40, 45, or 50 or more nucleotides in length. An antisense nucleic acid of the invention can be constructed using chemical synthesis and enzymatic ligation reactions using procedures known in the art. For example, an antisense nucleic acid (*e.g.*, an antisense

oligonucleotide) can be chemically synthesized using naturally occurring nucleotides or variously modified nucleotides designed to increase the biological stability of the molecules or to increase the physical stability of the duplex formed between the antisense and sense nucleic acids, *e.g.*, phosphorothioate derivatives and acridine substituted nucleotides can be used. Examples of modified nucleotides which can be used to generate the antisense nucleic acid include 5-fluorouracil, 5-bromouracil, 5-chlorouracil, 5-iodouracil, hypoxanthine, xanthine, 4-acetylcytosine, 5-(carboxyhydroxymethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5-carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2-methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine, 7-methylguanine, 5-methylaminomethyluracil, 5-methoxyaminomethyl-2-thiouracil, beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (v), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5-methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (v), 5-methyl-2-thiouracil, 3-(3-amino-3-N-2-carboxypropyl) uracil, (acp3)w, and 2,6-diaminopurine. Alternatively, the antisense nucleic acid can be produced biologically using an expression vector into which a nucleic acid has been sub-cloned in an antisense orientation (*i.e.*, RNA transcribed from the inserted nucleic acid will be of an antisense orientation to a target nucleic acid of interest, described further in the following subsection).

The antisense nucleic acid molecules of the invention are typically administered to a subject or generated *in situ* such that they hybridize with or bind to cellular mRNA and/or genomic DNA encoding a polypeptide corresponding to a selected marker of the invention to thereby inhibit expression of the marker, *e.g.*, by inhibiting transcription and/or translation. The hybridization can be by conventional nucleotide complementarity to form a stable duplex, or, for example, in the case of an antisense nucleic acid molecule which binds to DNA duplexes, through specific interactions in the major groove of the double helix. Examples of a route of administration of antisense nucleic acid molecules of the invention includes direct injection at a tissue site or infusion of the antisense nucleic acid into a prostate-associated body fluid.

Alternatively, antisense nucleic acid molecules can be modified to target selected cells and then administered systemically. For example, for systemic administration, antisense molecules can be modified such that they specifically bind to receptors or antigens expressed on a selected cell surface, *e.g.*, by linking the antisense nucleic acid molecules to peptides or antibodies which bind to cell surface receptors or antigens. The antisense nucleic acid molecules can also be delivered to cells using the vectors described herein. To achieve sufficient intracellular concentrations of the antisense molecules, vector constructs in which the antisense nucleic acid molecule is placed under the control of a strong pol II or pol III promoter are preferred.

10        An antisense nucleic acid molecule of the invention can be an  $\alpha$ -anomeric nucleic acid molecule. An  $\alpha$ -anomeric nucleic acid molecule forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual  $\alpha$ -units, the strands run parallel to each other (Gaultier *et al.*, 1987, *Nucleic Acids Res.* 15:6625-6641). The antisense nucleic acid molecule can also comprise a 2'-o-methylribonucleotide (Inoue *et al.*, 1987, *Nucleic Acids Res.* 15:6131-6148) or a  
15        chimeric RNA-DNA analogue (Inoue *et al.*, 1987, *FEBS Lett.* 215:327-330).

      The invention also encompasses ribozymes. Ribozymes are catalytic RNA molecules with ribonuclease activity which are capable of cleaving a single-stranded nucleic acid, such as an mRNA, to which they have a complementary region. Thus,  
20        ribozymes (*e.g.*, hammerhead ribozymes as described in Haselhoff and Gerlach, 1988, *Nature* 334:585-591) can be used to catalytically cleave mRNA transcripts to thereby inhibit translation of the protein encoded by the mRNA. A ribozyme having specificity for a nucleic acid molecule encoding a polypeptide corresponding to a marker of the invention can be designed based upon the nucleotide sequence of a cDNA corresponding  
25        to the marker. For example, a derivative of a *Tetrahymena* L-19 IVS RNA can be constructed in which the nucleotide sequence of the active site is complementary to the nucleotide sequence to be cleaved (see Cech *et al.* U.S. Patent No. 4,987,071; and Cech *et al.* U.S. Patent No. 5,116,742). Alternatively, an mRNA encoding a polypeptide of the invention can be used to select a catalytic RNA having a specific ribonuclease  
30        activity from a pool of RNA molecules (see, *e.g.*, Bartel and Szostak, 1993, *Science* 261:1411-1418).



The invention also encompasses nucleic acid molecules which form triple helical structures. For example, expression of a polypeptide of the invention can be inhibited by targeting nucleotide sequences complementary to the regulatory region of the gene encoding the polypeptide (*e.g.*, the promoter and/or enhancer) to form triple helical  
5 structures that prevent transcription of the gene in target cells. See generally Helene (1991) *Anticancer Drug Des.* 6(6):569-84; Helene (1992) *Ann. N.Y. Acad. Sci.* 660:27-36; and Maher (1992) *Bioassays* 14(12):807-15.

In various embodiments, the nucleic acid molecules of the invention can be modified at the base moiety, sugar moiety or phosphate backbone to improve, *e.g.*, the  
10 stability, hybridization, or solubility of the molecule. For example, the deoxyribose phosphate backbone of the nucleic acids can be modified to generate peptide nucleic acids (see Hyrup *et al.*, 1996, *Bioorganic & Medicinal Chemistry* 4(1): 5-23). As used herein, the terms "peptide nucleic acids" or "PNAs" refer to nucleic acid mimics, *e.g.*, DNA mimics, in which the deoxyribose phosphate backbone is replaced by a  
15 pseudopeptide backbone and only the four natural nucleobases are retained. The neutral backbone of PNAs has been shown to allow for specific hybridization to DNA and RNA under conditions of low ionic strength. The synthesis of PNA oligomers can be performed using standard solid phase peptide synthesis protocols as described in Hyrup *et al.* (1996), *supra*; Perry-O'Keefe *et al.* (1996) *Proc. Natl. Acad. Sci. USA* 93:14670-  
20 675.

PNAs can be used in therapeutic and diagnostic applications. For example, PNAs can be used as antisense or antigene agents for sequence-specific modulation of gene expression by, *e.g.*, inducing transcription or translation arrest or inhibiting replication. PNAs can also be used, *e.g.*, in the analysis of single base pair mutations in  
25 a gene by, *e.g.*, PNA directed PCR clamping; as artificial restriction enzymes when used in combination with other enzymes, *e.g.*, S1 nucleases (Hyrup (1996), *supra*; or as probes or primers for DNA sequence and hybridization (Hyrup, 1996, *supra*; Perry-O'Keefe *et al.*, 1996, *Proc. Natl. Acad. Sci. USA* 93:14670-675).

In another embodiment, PNAs can be modified, *e.g.*, to enhance their stability or  
30 cellular uptake, by attaching lipophilic or other helper groups to PNA, by the formation of PNA-DNA chimeras, or by the use of liposomes or other techniques of drug delivery known in the art. For example, PNA-DNA chimeras can be generated which can

combine the advantageous properties of PNA and DNA. Such chimeras allow DNA recognition enzymes, *e.g.*, RNASE H and DNA polymerases, to interact with the DNA portion while the PNA portion would provide high binding affinity and specificity. PNA-DNA chimeras can be linked using linkers of appropriate lengths selected in terms of base stacking, number of bonds between the nucleobases, and orientation (Hyrup, 1996, *supra*). The synthesis of PNA-DNA chimeras can be performed as described in Hyrup (1996), *supra*, and Finn *et al.* (1996) *Nucleic Acids Res.* 24(17):3357-63. For example, a DNA chain can be synthesized on a solid support using standard phosphoramidite coupling chemistry and modified nucleoside analogs. Compounds such as 5'-(4-methoxytrityl)amino-5'-deoxy-thymidine phosphoramidite can be used as a link between the PNA and the 5' end of DNA (Mag *et al.*, 1989, *Nucleic Acids Res.* 17:5973-88). PNA monomers are then coupled in a step-wise manner to produce a chimeric molecule with a 5' PNA segment and a 3' DNA segment (Finn *et al.*, 1996, *Nucleic Acids Res.* 24(17):3357-63). Alternatively, chimeric molecules can be synthesized with a 5' DNA segment and a 3' PNA segment (Peterser *et al.*, 1975, *Bioorganic Med. Chem. Lett.* 5:1119-11124).

In other embodiments, the oligonucleotide can include other appended groups such as peptides (*e.g.*, for targeting host cell receptors *in vivo*), or agents facilitating transport across the cell membrane (see, *e.g.*, Letsinger *et al.*, 1989, *Proc. Natl. Acad. Sci. USA* 86:6553-6556; Lemaitre *et al.*, 1987, *Proc. Natl. Acad. Sci. USA* 84:648-652; PCT Publication No. WO 88/09810) or the blood-brain barrier (see, *e.g.*, PCT Publication No. WO 89/10134). In addition, oligonucleotides can be modified with hybridization-triggered cleavage agents (see, *e.g.*, Krol *et al.*, 1988, *Bio/Techniques* 6:958-976) or intercalating agents (see, *e.g.*, Zon, 1988, *Pharm. Res.* 5:539-549). To this end, the oligonucleotide can be conjugated to another molecule, *e.g.*, a peptide, hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent, etc.

The invention also includes molecular beacon nucleic acids having at least one region which is complementary to a nucleic acid of the invention, such that the molecular beacon is useful for quantitating the presence of the nucleic acid of the invention in a sample. A "molecular beacon" nucleic acid is a nucleic acid comprising a pair of complementary regions and having a fluorophore and a fluorescent quencher

associated therewith. The fluorophore and quencher are associated with different portions of the nucleic acid in such an orientation that when the complementary regions are annealed with one another, fluorescence of the fluorophore is quenched by the quencher. When the complementary regions of the nucleic acid are not annealed with one another, fluorescence of the fluorophore is quenched to a lesser degree. Molecular beacon nucleic acids are described, for example, in U.S. Patent 5,876,930.

## II. Isolated Proteins and Antibodies

One aspect of the invention pertains to isolated proteins which correspond to individual markers of the invention, and biologically active portions thereof, as well as polypeptide fragments suitable for use as immunogens to raise antibodies directed against a polypeptide corresponding to a marker of the invention. In one embodiment, the native polypeptide corresponding to a marker can be isolated from cells or tissue sources by an appropriate purification scheme using standard protein purification techniques. In another embodiment, polypeptides corresponding to a marker of the invention are produced by recombinant DNA techniques. Alternative to recombinant expression, a polypeptide corresponding to a marker of the invention can be synthesized chemically using standard peptide synthesis techniques.

An "isolated" or "purified" protein or biologically active portion thereof is substantially free of cellular material or other contaminating proteins from the cell or tissue source from which the protein is derived, or substantially free of chemical precursors or other chemicals when chemically synthesized. The language "substantially free of cellular material" includes preparations of protein in which the protein is separated from cellular components of the cells from which it is isolated or recombinantly produced. Thus, protein that is substantially free of cellular material includes preparations of protein having less than about 30%, 20%, 10%, or 5% (by dry weight) of heterologous protein (also referred to herein as a "contaminating protein"). When the protein or biologically active portion thereof is recombinantly produced, it is also preferably substantially free of culture medium, *i.e.*, culture medium represents less than about 20%, 10%, or 5% of the volume of the protein preparation. When the protein is produced by chemical synthesis, it is preferably substantially free of chemical precursors or other chemicals, *i.e.*, it is separated from chemical precursors or other

chemicals which are involved in the synthesis of the protein. Accordingly such preparations of the protein have less than about 30%, 20%, 10%, 5% (by dry weight) of chemical precursors or compounds other than the polypeptide of interest.

Biologically active portions of a polypeptide corresponding to a marker of the invention include polypeptides comprising amino acid sequences sufficiently identical to or derived from the amino acid sequence of the protein corresponding to the marker (e.g., the amino acid sequence listed in the GenBank and IMAGE Consortium database records described herein), which include fewer amino acids than the full length protein, and exhibit at least one activity of the corresponding full-length protein. Typically, biologically active portions comprise a domain or motif with at least one activity of the corresponding protein. A biologically active portion of a protein of the invention can be a polypeptide which is, for example, 10, 25, 50, 100 or more amino acids in length. Moreover, other biologically active portions, in which other regions of the protein are deleted, can be prepared by recombinant techniques and evaluated for one or more of the functional activities of the native form of a polypeptide of the invention.

Preferred polypeptides have the amino acid sequence listed in the one of the GenBank and IMAGE Consortium database records described herein. Other useful proteins are substantially identical (e.g., at least about 40%, preferably 50%, 60%, 70%, 80%, 90%, 95%, or 99%) to one of these sequences and retain the functional activity of the protein of the corresponding naturally-occurring protein yet differ in amino acid sequence due to natural allelic variation or mutagenesis.

To determine the percent identity of two amino acid sequences or of two nucleic acids, the sequences are aligned for optimal comparison purposes (e.g., gaps can be introduced in the sequence of a first amino acid or nucleic acid sequence for optimal alignment with a second amino or nucleic acid sequence). The amino acid residues or nucleotides at corresponding amino acid positions or nucleotide positions are then compared. When a position in the first sequence is occupied by the same amino acid residue or nucleotide as the corresponding position in the second sequence, then the molecules are identical at that position. The percent identity between the two sequences is a function of the number of identical positions shared by the sequences (i.e., % identity = # of identical positions/total # of positions (e.g., overlapping positions) x 100). In one embodiment the two sequences are the same length.

The determination of percent identity between two sequences can be accomplished using a mathematical algorithm. A preferred, non-limiting example of a mathematical algorithm utilized for the comparison of two sequences is the algorithm of Karlin and Altschul (1990) *Proc. Natl. Acad. Sci. USA* 87:2264-2268, modified as in

5 Karlin and Altschul (1993) *Proc. Natl. Acad. Sci. USA* 90:5873-5877. Such an algorithm is incorporated into the NBLAST and XBLAST programs of Altschul, *et al.* (1990) *J. Mol. Biol.* 215:403-410. BLAST nucleotide searches can be performed with the NBLAST program, score = 100, wordlength = 12 to obtain nucleotide sequences homologous to a nucleic acid molecules of the invention. BLAST protein searches can

10 be performed with the XBLAST program, score = 50, wordlength = 3 to obtain amino acid sequences homologous to a protein molecules of the invention. To obtain gapped alignments for comparison purposes, Gapped BLAST can be utilized as described in Altschul *et al.* (1997) *Nucleic Acids Res.* 25:3389-3402. Alternatively, PSI-Blast can be used to perform an iterated search which detects distant relationships between

15 molecules. When utilizing BLAST, Gapped BLAST, and PSI-Blast programs, the default parameters of the respective programs (*e.g.*, XBLAST and NBLAST) can be used. See <http://www.ncbi.nlm.nih.gov>. Another preferred, non-limiting example of a mathematical algorithm utilized for the comparison of sequences is the algorithm of Myers and Miller, (1988) *CABIOS* 4:11-17. Such an algorithm is incorporated into the

20 ALIGN program (version 2.0) which is part of the GCG sequence alignment software package. When utilizing the ALIGN program for comparing amino acid sequences, a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4 can be used. Yet another useful algorithm for identifying regions of local sequence similarity and alignment is the FASTA algorithm as described in Pearson and Lipman (1988)

25 *Proc. Natl. Acad. Sci. USA* 85:2444-2448. When using the FASTA algorithm for comparing nucleotide or amino acid sequences, a PAM120 weight residue table can, for example, be used with a *k*-tuple value of 2.

The percent identity between two sequences can be determined using techniques similar to those described above, with or without allowing gaps. In calculating percent

30 identity, only exact matches are counted.

The invention also provides chimeric or fusion proteins corresponding to a marker of the invention. As used herein, a "chimeric protein" or "fusion protein" comprises all or part (preferably a biologically active part) of a polypeptide corresponding to a marker of the invention operably linked to a heterologous polypeptide (*i.e.*, a polypeptide other than the polypeptide corresponding to the marker). Within the fusion protein, the term "operably linked" is intended to indicate that the polypeptide of the invention and the heterologous polypeptide are fused in-frame to each other. The heterologous polypeptide can be fused to the amino-terminus or the carboxyl-terminus of the polypeptide of the invention.

One useful fusion protein is a GST fusion protein in which a polypeptide corresponding to a marker of the invention is fused to the carboxyl terminus of GST sequences. Such fusion proteins can facilitate the purification of a recombinant polypeptide of the invention.

In another embodiment, the fusion protein contains a heterologous signal sequence at its amino terminus. For example, the native signal sequence of a polypeptide corresponding to a marker of the invention can be removed and replaced with a signal sequence from another protein. For example, the gp67 secretory sequence of the baculovirus envelope protein can be used as a heterologous signal sequence (Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, NY, 1992). Other examples of eukaryotic heterologous signal sequences include the secretory sequences of melittin and human placental alkaline phosphatase (Stratagene; La Jolla, California). In yet another example, useful prokaryotic heterologous signal sequences include the phoA secretory signal (Sambrook *et al.*, *supra*) and the protein A secretory signal (Pharmacia Biotech; Piscataway, New Jersey).

In yet another embodiment, the fusion protein is an immunoglobulin fusion protein in which all or part of a polypeptide corresponding to a marker of the invention is fused to sequences derived from a member of the immunoglobulin protein family. The immunoglobulin fusion proteins of the invention can be incorporated into pharmaceutical compositions and administered to a subject to inhibit an interaction between a ligand (soluble or membrane-bound) and a protein on the surface of a cell (receptor), to thereby suppress signal transduction *in vivo*. The immunoglobulin fusion protein can be used to affect the bioavailability of a cognate ligand of a polypeptide of

the invention. Inhibition of ligand/receptor interaction can be useful therapeutically, both for treating proliferative and differentiative disorders and for modulating (*e.g.* promoting or inhibiting) cell survival. Moreover, the immunoglobulin fusion proteins of the invention can be used as immunogens to produce antibodies directed against a polypeptide of the invention in a subject, to purify ligands and in screening assays to identify molecules which inhibit the interaction of receptors with ligands.

Chimeric and fusion proteins of the invention can be produced by standard recombinant DNA techniques. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers. Alternatively, PCR amplification of gene fragments can be carried out using anchor primers which give rise to complementary overhangs between two consecutive gene fragments which can subsequently be annealed and re-amplified to generate a chimeric gene sequence (see, *e.g.*, Ausubel *et al.*, *supra*). Moreover, many expression vectors are commercially available that already encode a fusion moiety (*e.g.*, a GST polypeptide). A nucleic acid encoding a polypeptide of the invention can be cloned into such an expression vector such that the fusion moiety is linked in-frame to the polypeptide of the invention.

A signal sequence can be used to facilitate secretion and isolation of the secreted protein or other proteins of interest. Signal sequences are typically characterized by a core of hydrophobic amino acids which are generally cleaved from the mature protein during secretion in one or more cleavage events. Such signal peptides contain processing sites that allow cleavage of the signal sequence from the mature proteins as they pass through the secretory pathway. Thus, the invention pertains to the described polypeptides having a signal sequence, as well as to polypeptides from which the signal sequence has been proteolytically cleaved (*i.e.*, the cleavage products). In one embodiment, a nucleic acid sequence encoding a signal sequence can be operably linked in an expression vector to a protein of interest, such as a protein which is ordinarily not secreted or is otherwise difficult to isolate. The signal sequence directs secretion of the protein, such as from a eukaryotic host into which the expression vector is transformed, and the signal sequence is subsequently or concurrently cleaved. The protein can then be readily purified from the extracellular medium by art recognized methods.

Alternatively, the signal sequence can be linked to the protein of interest using a sequence which facilitates purification, such as with a GST domain.

The present invention also pertains to variants of the polypeptides corresponding to individual markers of the invention. Such variants have an altered amino acid sequence which can function as either agonists (mimetics) or as antagonists. Variants can be generated by mutagenesis, *e.g.*, discrete point mutation or truncation. An agonist can retain substantially the same, or a subset, of the biological activities of the naturally occurring form of the protein. An antagonist of a protein can inhibit one or more of the activities of the naturally occurring form of the protein by, for example, competitively binding to a downstream or upstream member of a cellular signaling cascade which includes the protein of interest. Thus, specific biological effects can be elicited by treatment with a variant of limited function. Treatment of a subject with a variant having a subset of the biological activities of the naturally occurring form of the protein can have fewer side effects in a subject relative to treatment with the naturally occurring form of the protein.

Variants of a protein of the invention which function as either agonists (mimetics) or as antagonists can be identified by screening combinatorial libraries of mutants, *e.g.*, truncation mutants, of the protein of the invention for agonist or antagonist activity. In one embodiment, a variegated library of variants is generated by combinatorial mutagenesis at the nucleic acid level and is encoded by a variegated gene library. A variegated library of variants can be produced by, for example, enzymatically ligating a mixture of synthetic oligonucleotides into gene sequences such that a degenerate set of potential protein sequences is expressible as individual polypeptides, or alternatively, as a set of larger fusion proteins (*e.g.*, for phage display). There are a variety of methods which can be used to produce libraries of potential variants of the polypeptides of the invention from a degenerate oligonucleotide sequence. Methods for synthesizing degenerate oligonucleotides are known in the art (see, *e.g.*, Narang, 1983, *Tetrahedron* 39:3; Itakura *et al.*, 1984, *Annu. Rev. Biochem.* 53:323; Itakura *et al.*, 1984, *Science* 198:1056; Ike *et al.*, 1983 *Nucleic Acid Res.* 11:477).

In addition, libraries of fragments of the coding sequence of a polypeptide corresponding to a marker of the invention can be used to generate a variegated population of polypeptides for screening and subsequent selection of variants. For



example, a library of coding sequence fragments can be generated by treating a double stranded PCR fragment of the coding sequence of interest with a nuclease under conditions wherein nicking occurs only about once per molecule, denaturing the double stranded DNA, renaturing the DNA to form double stranded DNA which can include  
5 sense/antisense pairs from different nicked products, removing single stranded portions from reformed duplexes by treatment with S1 nuclease, and ligating the resulting fragment library into an expression vector. By this method, an expression library can be derived which encodes amino terminal and internal fragments of various sizes of the protein of interest.

10 Several techniques are known in the art for screening gene products of combinatorial libraries made by point mutations or truncation, and for screening cDNA libraries for gene products having a selected property. The most widely used techniques, which are amenable to high through-put analysis, for screening large gene libraries typically include cloning the gene library into replicable expression vectors,  
15 transforming appropriate cells with the resulting library of vectors, and expressing the combinatorial genes under conditions in which detection of a desired activity facilitates isolation of the vector encoding the gene whose product was detected. Recursive ensemble mutagenesis (REM), a technique which enhances the frequency of functional mutants in the libraries, can be used in combination with the screening assays to identify  
20 variants of a protein of the invention (Arkin and Yourvan, 1992, *Proc. Natl. Acad. Sci. USA* 89:7811-7815; Delgrave *et al.*, 1993, *Protein Engineering* 6(3):327- 331).

An isolated polypeptide corresponding to a marker of the invention, or a fragment thereof, can be used as an immunogen to generate antibodies using standard techniques for polyclonal and monoclonal antibody preparation. The full-length  
25 polypeptide or protein can be used or, alternatively, the invention provides antigenic peptide fragments for use as immunogens. The antigenic peptide of a protein of the invention comprises at least 8 (preferably 10, 15, 20, or 30 or more) amino acid residues of the amino acid sequence of one of the polypeptides of the invention, and encompasses an epitope of the protein such that an antibody raised against the peptide forms a specific  
30 immune complex with a marker of the invention to which the protein corresponds. Preferred epitopes encompassed by the antigenic peptide are regions that are located on the surface of the protein, *e.g.*, hydrophilic regions. Hydrophobicity sequence analysis,

hydrophilicity sequence analysis, or similar analyses can be used to identify hydrophilic regions.

An immunogen typically is used to prepare antibodies by immunizing a suitable (*i.e.* immunocompetent) subject such as a rabbit, goat, mouse, or other mammal or  
5 vertebrate. An appropriate immunogenic preparation can contain, for example, recombinantly-expressed or chemically-synthesized polypeptide. The preparation can further include an adjuvant, such as Freund's complete or incomplete adjuvant, or a similar immunostimulatory agent.

Accordingly, another aspect of the invention pertains to antibodies directed  
10 against a polypeptide of the invention. The terms "antibody" and "antibody substance" as used interchangeably herein refer to immunoglobulin molecules and immunologically active portions of immunoglobulin molecules, *i.e.*, molecules that contain an antigen binding site which specifically binds an antigen, such as a polypeptide of the invention, *e.g.*, an epitope of a polypeptide of the invention. A molecule which specifically binds  
15 to a given polypeptide of the invention is a molecule which binds the polypeptide, but does not substantially bind other molecules in a sample, *e.g.*, a biological sample, which naturally contains the polypeptide. Examples of immunologically active portions of immunoglobulin molecules include F(ab) and F(ab')<sub>2</sub> fragments which can be generated by treating the antibody with an enzyme such as pepsin. The invention provides  
20 polyclonal and monoclonal antibodies. The term "monoclonal antibody" or "monoclonal antibody composition", as used herein, refers to a population of antibody molecules that contain only one species of an antigen binding site capable of immunoreacting with a particular epitope.

Polyclonal antibodies can be prepared as described above by immunizing a  
25 suitable subject with a polypeptide of the invention as an immunogen. Preferred polyclonal antibody compositions are ones that have been selected for antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred polyclonal antibody preparations are ones that contain only antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred immunogen  
30 compositions are those that contain no other human proteins such as, for example, immunogen compositions made using a non-human host cell for recombinant expression of a polypeptide of the invention. In such a manner, the only human epitope or epitopes

recognized by the resulting antibody compositions raised against this immunogen will be present as part of a polypeptide or polypeptides of the invention.

The antibody titer in the immunized subject can be monitored over time by standard techniques, such as with an enzyme linked immunosorbent assay (ELISA) using immobilized polypeptide. If desired, the antibody molecules can be harvested or isolated from the subject (*e.g.*, from the blood or serum of the subject) and further purified by well-known techniques, such as protein A chromatography to obtain the IgG fraction. Alternatively, antibodies specific for a protein or polypeptide of the invention can be selected or (*e.g.*, partially purified) or purified by, *e.g.*, affinity chromatography. For example, a recombinantly expressed and purified (or partially purified) protein of the invention is produced as described herein, and covalently or non-covalently coupled to a solid support such as, for example, a chromatography column. The column can then be used to affinity purify antibodies specific for the proteins of the invention from a sample containing antibodies directed against a large number of different epitopes, thereby generating a substantially purified antibody composition, *i.e.*, one that is substantially free of contaminating antibodies. By a substantially purified antibody composition is meant, in this context, that the antibody sample contains at most only 30% (by dry weight) of contaminating antibodies directed against epitopes other than those of the desired protein or polypeptide of the invention, and preferably at most 20%, yet more preferably at most 10%, and most preferably at most 5% (by dry weight) of the sample is contaminating antibodies. A purified antibody composition means that at least 99% of the antibodies in the composition are directed against the desired protein or polypeptide of the invention.

At an appropriate time after immunization, *e.g.*, when the specific antibody titers are highest, antibody-producing cells can be obtained from the subject and used to prepare monoclonal antibodies by standard techniques, such as the hybridoma technique originally described by Kohler and Milstein (1975) *Nature* 256:495-497, the human B cell hybridoma technique (see Kozbor *et al.*, 1983, *Immunol. Today* 4:72), the EBV-hybridoma technique (see Cole *et al.*, pp. 77-96 In *Monoclonal Antibodies and Cancer Therapy*, Alan R. Liss, Inc., 1985) or trioma techniques. The technology for producing hybridomas is well known (see generally *Current Protocols in Immunology*, Coligan *et al.* ed., John Wiley & Sons, New York, 1994). Hybridoma cells producing a

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monoclonal antibody of the invention are detected by screening the hybridoma culture supernatants for antibodies that bind the polypeptide of interest, *e.g.*, using a standard ELISA assay.

Alternative to preparing monoclonal antibody-secreting hybridomas, a  
5 monoclonal antibody directed against a polypeptide of the invention can be identified and isolated by screening a recombinant combinatorial immunoglobulin library (*e.g.*, an antibody phage display library) with the polypeptide of interest. Kits for generating and screening phage display libraries are commercially available (*e.g.*, the Pharmacia *Recombinant Phage Antibody System*, Catalog No. 27-9400-01; and the Stratagene  
10 *SurfZAP Phage Display Kit*, Catalog No. 240612). Additionally, examples of methods and reagents particularly amenable for use in generating and screening antibody display library can be found in, for example, U.S. Patent No. 5,223,409; PCT Publication No. WO 92/18619; PCT Publication No. WO 91/17271; PCT Publication No. WO 92/20791; PCT Publication No. WO 92/15679; PCT Publication No. WO 93/01288; PCT  
15 Publication No. WO 92/01047; PCT Publication No. WO 92/09690; PCT Publication No. WO 90/02809; Fuchs *et al.* (1991) *Bio/Technology* 9:1370-1372; Hay *et al.* (1992) *Hum. Antibod. Hybridomas* 3:81-85; Huse *et al.* (1989) *Science* 246:1275-1281; Griffiths *et al.* (1993) *EMBO J.* 12:725-734.

Additionally, recombinant antibodies, such as chimeric and humanized  
20 monoclonal antibodies, comprising both human and non-human portions, which can be made using standard recombinant DNA techniques, are within the scope of the invention. A chimeric antibody is a molecule in which different portions are derived from different animal species, such as those having a variable region derived from a murine mAb and a human immunoglobulin constant region. (See, *e.g.*, Cabilly *et al.*,  
25 U.S. Patent No. 4,816,567; and Boss *et al.*, U.S. Patent No. 4,816,397, which are incorporated herein by reference in their entirety.) Humanized antibodies are antibody molecules from non-human species having one or more complementarily determining regions (CDRs) from the non-human species and a framework region from a human immunoglobulin molecule. (See, *e.g.*, Queen, U.S. Patent No. 5,585,089, which is  
30 incorporated herein by reference in its entirety.) Such chimeric and humanized monoclonal antibodies can be produced by recombinant DNA techniques known in the art, for example using methods described in PCT Publication No. WO 87/02671;

European Patent Application 184,187; European Patent Application 171,496; European Patent Application 173,494; PCT Publication No. WO 86/01533; U.S. Patent No. 4,816,567; European Patent Application 125,023; Better *et al.* (1988) *Science* 240:1041-1043; Liu *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:3439-3443; Liu *et al.* (1987) *J. Immunol.* 139:3521-3526; Sun *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:214-218; Nishimura *et al.* (1987) *Cancer Res.* 47:999-1005; Wood *et al.* (1985) *Nature* 314:446-449; and Shaw *et al.* (1988) *J. Natl. Cancer Inst.* 80:1553-1559; Morrison (1985) *Science* 229:1202-1207; Oi *et al.* (1986) *Bio/Techniques* 4:214; U.S. Patent 5,225,539; Jones *et al.* (1986) *Nature* 321:552-525; Verhoeyan *et al.* (1988) *Science* 239:1534; and  
10 Beidler *et al.* (1988) *J. Immunol.* 141:4053-4060.

Antibodies of the invention may be used as therapeutic agents in treating cancers. In a preferred embodiment, completely human antibodies of the invention are used for therapeutic treatment of human cancer patients, particularly those having an ovarian cancer. Such antibodies can be produced, for example, using transgenic mice which are  
15 incapable of expressing endogenous immunoglobulin heavy and light chains genes, but which can express human heavy and light chain genes. The transgenic mice are immunized in the normal fashion with a selected antigen, *e.g.*, all or a portion of a polypeptide corresponding to a marker of the invention. Monoclonal antibodies directed against the antigen can be obtained using conventional hybridoma technology. The  
20 human immunoglobulin transgenes harbored by the transgenic mice rearrange during B cell differentiation, and subsequently undergo class switching and somatic mutation. Thus, using such a technique, it is possible to produce therapeutically useful IgG, IgA and IgE antibodies. For an overview of this technology for producing human antibodies, see Lonberg and Huszar (1995) *Int. Rev. Immunol.* 13:65-93). For a detailed discussion  
25 of this technology for producing human antibodies and human monoclonal antibodies and protocols for producing such antibodies, see, *e.g.*, U.S. Patent 5,625,126; U.S. Patent 5,633,425; U.S. Patent 5,569,825; U.S. Patent 5,661,016; and U.S. Patent 5,545,806. In addition, companies such as Abgenix, Inc. (Freemont, CA), can be engaged to provide human antibodies directed against a selected antigen using technology similar to that  
30 described above.

Completely human antibodies which recognize a selected epitope can be generated using a technique referred to as "guided selection." In this approach a selected non-human monoclonal antibody, *e.g.*, a murine antibody, is used to guide the selection of a completely human antibody recognizing the same epitope (Jespers *et al.*, 1994, 5 *Bio/technology* 12:899-903).

An antibody directed against a polypeptide corresponding to a marker of the invention (*e.g.*, a monoclonal antibody) can be used to isolate the polypeptide by standard techniques, such as affinity chromatography or immunoprecipitation. Moreover, such an antibody can be used to detect the marker (*e.g.*, in a cellular lysate or 10 cell supernatant) in order to evaluate the level and pattern of expression of the marker. The antibodies can also be used diagnostically to monitor protein levels in tissues or body fluids as part of a clinical testing procedure, *e.g.*, to, for example, determine the efficacy of a given treatment regimen. Detection can be facilitated by coupling the antibody to a detectable substance. Examples of detectable substances include various 15 enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, and radioactive materials. Examples of suitable enzymes include horseradish peroxidase, alkaline phosphatase,  $\beta$ -galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, 20 fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein, dansyl chloride or phycoerythrin; an example of a luminescent material includes luminol; examples of bioluminescent materials include luciferase, luciferin, and aequorin, and examples of suitable radioactive material include  $^{125}\text{I}$ ,  $^{131}\text{I}$ ,  $^{35}\text{S}$  or  $^3\text{H}$ .

Further, an antibody (or fragment thereof) can be conjugated to a therapeutic 25 moiety such as a cytotoxin, a therapeutic agent or a radioactive metal ion. A cytotoxin

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decarbazine), alkylating agents (*e.g.*, mechlorethamine, thioepa chlorambucil, melphalan, carmustine (BSNU) and lomustine (CCNU), cyclophosphamide, busulfan, dibromomannitol, streptozotocin, mitomycin C, and cis-dichlorodiamine platinum (II) (DDP) cisplatin), anthracyclines (*e.g.*, daunorubicin (formerly daunomycin) and  
5 doxorubicin), antibiotics (*e.g.*, dactinomycin (formerly actinomycin), bleomycin, mithramycin, and anthramycin (AMC)), and anti-mitotic agents (*e.g.*, vincristine and vinblastine).

The conjugates of the invention can be used for modifying a given biological response, the drug moiety is not to be construed as limited to classical chemical  
10 therapeutic agents. For example, the drug moiety may be a protein or polypeptide possessing a desired biological activity. Such proteins may include, for example, a toxin such as abrin, ricin A, pseudomonas exotoxin, or diphtheria toxin; a protein such as tumor necrosis factor, .alpha.-interferon, .beta.-interferon, nerve growth factor, platelet derived growth factor, tissue plasminogen activator; or, biological response modifiers  
15 such as, for example, lymphokines, interleukin-1 ("IL-1"), interleukin-2 ("IL-2"), interleukin-6 ("IL-6"), granulocyte macrophase colony stimulating factor ("GM-CSF"), granulocyte colony stimulating factor ("G-CSF"), or other growth factors.

Techniques for conjugating such therapeutic moiety to antibodies are well known, see, *e.g.*, Arnon et al., "Monoclonal Antibodies For Immunotargeting Of Drugs  
20 In Cancer Therapy", in Monoclonal Antibodies And Cancer Therapy, Reisfeld et al. (eds.), pp. 243-56 (Alan R. Liss, Inc. 1985); Hellstrom et al., "Antibodies For Drug Delivery", in Controlled Drug Delivery (2nd Ed.), Robinson et al. (eds.), pp. 623-53 (Marcel Dekker, Inc. 1987); Thorpe, "Antibody Carriers Of Cytotoxic Agents In Cancer Therapy: A Review", in Monoclonal Antibodies '84: Biological And Clinical  
25 Applications, Pinchera et al. (eds.), pp. 475-506 (1985); "Analysis, Results, And Future Prospective Of The Therapeutic Use Of Radiolabeled Antibody In Cancer Therapy", in Monoclonal Antibodies For Cancer Detection And Therapy, Baldwin et al. (eds.), pp. 303-16 (Academic Press 1985), and Thorpe et al., "The Preparation And Cytotoxic Properties Of Antibody-Toxin Conjugates", Immunol. Rev., 62:119-58 (1982).

Alternatively, an antibody can be conjugated to a second antibody to form an antibody heteroconjugate as described by Segal in U.S. Patent No. 4,676,980.

Accordingly, in one aspect, the invention provides substantially purified antibodies or fragments thereof, and non-human antibodies or fragments thereof, which  
5 antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid  
10 sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement  
15 thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. In various embodiments, the substantially purified antibodies of the invention, or fragments thereof, can be human, non-human, chimeric and/or humanized antibodies.

In another aspect, the invention provides non-human antibodies or fragments  
20 thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of: the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the  
25 amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a  
30 complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. Such non-human antibodies can be goat, mouse, sheep, horse, chicken, rabbit, or rat antibodies. Alternatively, the non-human antibodies



of the invention can be chimeric and/or humanized antibodies. In addition, the non-human antibodies of the invention can be polyclonal antibodies or monoclonal antibodies.

In still a further aspect, the invention provides monoclonal antibodies or  
5 fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid  
10 sequence of the present invention, an amino acid sequence which is at least 95% identical to an amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a  
15 nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. The monoclonal antibodies can be human, humanized, chimeric and/or non-human antibodies.

The substantially purified antibodies or fragments thereof may specifically bind to a signal peptide, a secreted sequence, an extracellular domain, a transmembrane or a  
20 cytoplasmic domain or cytoplasmic membrane of a polypeptide of the invention. In a particularly preferred embodiment, the substantially purified antibodies or fragments thereof, the non-human antibodies or fragments thereof, and/or the monoclonal antibodies or fragments thereof, of the invention specifically bind to a secreted sequence or an extracellular domain of the amino acid sequences of the present invention.

25 Any of the antibodies of the invention can be conjugated to a therapeutic moiety or to a detectable substance. Non-limiting examples of detectable substances that can be conjugated to the antibodies of the invention are an enzyme, a prosthetic group, a fluorescent material, a luminescent material, a bioluminescent material, and a radioactive material.

30 The invention also provides a kit containing an antibody of the invention conjugated to a detectable substance, and instructions for use. Still another aspect of the invention is a pharmaceutical composition comprising an antibody of the invention and a

pharmaceutically acceptable carrier. In preferred embodiments, the pharmaceutical composition contains an antibody of the invention, a therapeutic moiety, and a pharmaceutically acceptable carrier.

Still another aspect of the invention is a method of making an antibody that  
5 specifically recognizes a polypeptide of the present invention, the method comprising immunizing a mammal with a polypeptide. The polypeptide used as an immunogen comprises an amino acid sequence selected from the group consisting of the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the nucleic acid molecules of the present invention, a fragment of at least 15 amino acid  
10 residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid  
15 molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C.

After immunization, a sample is collected from the mammal that contains an antibody that specifically recognizes the polypeptide. Preferably, the polypeptide is  
20 recombinantly produced using a non-human host cell. Optionally, the antibodies can be further purified from the sample using techniques well known to those of skill in the art. The method can further comprise producing a monoclonal antibody-producing cell from the cells of the mammal. Optionally, antibodies are collected from the antibody-producing cell.

25

### III. Recombinant Expression Vectors and Host Cells

Another aspect of the invention pertains to vectors, preferably expression vectors, containing a nucleic acid encoding a polypeptide corresponding to a marker of the invention (or a portion of such a polypeptide). As used herein, the term "vector"  
30 refers to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector is a "plasmid", which refers to a circular double stranded DNA loop into which additional DNA segments can be ligated. Another type

of vector is a viral vector, wherein additional DNA segments can be ligated into the viral genome. Certain vectors are capable of autonomous replication in a host cell into which they are introduced (*e.g.*, bacterial vectors having a bacterial origin of replication and episomal mammalian vectors). Other vectors (*e.g.*, non-episomal mammalian vectors) are integrated into the genome of a host cell upon introduction into the host cell, and thereby are replicated along with the host genome. Moreover, certain vectors, namely expression vectors, are capable of directing the expression of genes to which they are operably linked. In general, expression vectors of utility in recombinant DNA techniques are often in the form of plasmids (vectors). However, the invention is intended to include such other forms of expression vectors, such as viral vectors (*e.g.*, replication defective retroviruses, adenoviruses and adeno-associated viruses), which serve equivalent functions.

The recombinant expression vectors of the invention comprise a nucleic acid of the invention in a form suitable for expression of the nucleic acid in a host cell. This means that the recombinant expression vectors include one or more regulatory sequences, selected on the basis of the host cells to be used for expression, which is operably linked to the nucleic acid sequence to be expressed. Within a recombinant expression vector, "operably linked" is intended to mean that the nucleotide sequence of interest is linked to the regulatory sequence(s) in a manner which allows for expression of the nucleotide sequence (*e.g.*, in an *in vitro* transcription/translation system or in a host cell when the vector is introduced into the host cell). The term "regulatory sequence" is intended to include promoters, enhancers and other expression control elements (*e.g.*, polyadenylation signals). Such regulatory sequences are described, for example, in Goeddel, *Methods in Enzymology: Gene Expression Technology* vol.185, Academic Press, San Diego, CA (1991). Regulatory sequences include those which direct constitutive expression of a nucleotide sequence in many types of host cell and those which direct expression of the nucleotide sequence only in certain host cells (*e.g.*, tissue-specific regulatory sequences). It will be appreciated by those skilled in the art that the design of the expression vector can depend on such factors as the choice of the host cell to be transformed, the level of expression of protein desired, and the like. The expression vectors of the invention can be introduced into host cells to thereby produce

proteins or peptides, including fusion proteins or peptides, encoded by nucleic acids as described herein.

The recombinant expression vectors of the invention can be designed for expression of a polypeptide corresponding to a marker of the invention in prokaryotic  
5 (e.g., *E. coli*) or eukaryotic cells (e.g., insect cells {using baculovirus expression vectors}, yeast cells or mammalian cells). Suitable host cells are discussed further in Goeddel, *supra*. Alternatively, the recombinant expression vector can be transcribed and translated *in vitro*, for example using T7 promoter regulatory sequences and T7 polymerase.

10 Expression of proteins in prokaryotes is most often carried out in *E. coli* with vectors containing constitutive or inducible promoters directing the expression of either fusion or non-fusion proteins. Fusion vectors add a number of amino acids to a protein encoded therein, usually to the amino terminus of the recombinant protein. Such fusion vectors typically serve three purposes: 1) to increase expression of recombinant protein;  
15 2) to increase the solubility of the recombinant protein; and 3) to aid in the purification of the recombinant protein by acting as a ligand in affinity purification. Often, in fusion expression vectors, a proteolytic cleavage site is introduced at the junction of the fusion moiety and the recombinant protein to enable separation of the recombinant protein from the fusion moiety subsequent to purification of the fusion protein. Such enzymes, and  
20 their cognate recognition sequences, include Factor Xa, thrombin and enterokinase. Typical fusion expression vectors include pGEX (Pharmacia Biotech Inc; Smith and Johnson, 1988, *Gene* 67:31-40), pMAL (New England Biolabs, Beverly, MA) and pRIT5 (Pharmacia, Piscataway, NJ) which fuse glutathione S-transferase (GST), maltose E binding protein, or protein A, respectively, to the target recombinant protein.

25 Examples of suitable inducible non-fusion *E. coli* expression vectors include pTrc (Amann *et al.*, 1988, *Gene* 69:301-315) and pET 11d (Studier *et al.*, p. 60-89, In *Gene Expression Technology: Methods in Enzymology* vol.185, Academic Press, San Diego, CA, 1991). Target gene expression from the pTrc vector relies on host RNA polymerase transcription from a hybrid trp-lac fusion promoter. Target gene expression  
30 from the pET 11d vector relies on transcription from a T7 gn10-lac fusion promoter mediated by a co-expressed viral RNA polymerase (T7 gn1). This viral polymerase is

supplied by host strains BL21(DE3) or HMS174(DE3) from a resident prophage harboring a T7 *gn1* gene under the transcriptional control of the lacUV 5 promoter.

One strategy to maximize recombinant protein expression in *E. coli* is to express the protein in a host bacteria with an impaired capacity to proteolytically cleave the recombinant protein (Gottesman, p. 119-128, In *Gene Expression Technology: Methods in Enzymology* vol. 185, Academic Press, San Diego, CA, 1990. Another strategy is to alter the nucleic acid sequence of the nucleic acid to be inserted into an expression vector so that the individual codons for each amino acid are those preferentially utilized in *E. coli* (Wada *et al.*, 1992, *Nucleic Acids Res.* 20:2111-2118). Such alteration of nucleic acid sequences of the invention can be carried out by standard DNA synthesis techniques.

In another embodiment, the expression vector is a yeast expression vector. Examples of vectors for expression in yeast *S. cerevisiae* include pYepSec1 (Baldari *et al.*, 1987, *EMBO J.* 6:229-234), pMFa (Kurjan and Herskowitz, 1982, *Cell* 30:933-943), pJRY88 (Schultz *et al.*, 1987, *Gene* 54:113-123), pYES2 (Invitrogen Corporation, San Diego, CA), and pPicZ (Invitrogen Corp, San Diego, CA).

Alternatively, the expression vector is a baculovirus expression vector. Baculovirus vectors available for expression of proteins in cultured insect cells (*e.g.*, Sf 9 cells) include the pAc series (Smith *et al.*, 1983, *Mol. Cell Biol.* 3:2156-2165) and the pVL series (Lucklow and Summers, 1989, *Virology* 170:31-39).

In yet another embodiment, a nucleic acid of the invention is expressed in mammalian cells using a mammalian expression vector. Examples of mammalian expression vectors include pCDM8 (Seed, 1987, *Nature* 329:840) and pMT2NOPC (Kaufman *et al.*, 1987, *EMBO J.* 6:187-195). When used in mammalian cells, the expression vector's control functions are often provided by viral regulatory elements. For example, commonly used promoters are derived from polyoma, Adenovirus 2, cytomegalovirus and Simian Virus 40. For other suitable expression systems for both prokaryotic and eukaryotic cells see chapters 16 and 17 of Sambrook *et al.*, *supra*.

In another embodiment, the recombinant mammalian expression vector is capable of directing expression of the nucleic acid preferentially in a particular cell type (*e.g.*, tissue-specific regulatory elements are used to express the nucleic acid). Tissue-specific regulatory elements are known in the art. Non-limiting examples of suitable

tissue-specific promoters include the albumin promoter (liver-specific; Pinkert *et al.*, 1987, *Genes Dev.* 1:268-277), lymphoid-specific promoters (Calame and Eaton, 1988, *Adv. Immunol.* 43:235-275), in particular promoters of T cell receptors (Winoto and Baltimore, 1989, *EMBO J.* 8:729-733) and immunoglobulins (Banerji *et al.*, 1983, *Cell* 5 33:729-740; Queen and Baltimore, 1983, *Cell* 33:741-748), neuron-specific promoters (*e.g.*, the neurofilament promoter; Byrne and Ruddle, 1989, *Proc. Natl. Acad. Sci. USA* 86:5473-5477), pancreas-specific promoters (Edlund *et al.*, 1985, *Science* 230:912-916), and mammary gland-specific promoters (*e.g.*, milk whey promoter; U.S. Patent No. 4,873,316 and European Application Publication No. 264,166). Developmentally- 10 regulated promoters are also encompassed, for example the murine hox promoters (Kessel and Gruss, 1990, *Science* 249:374-379) and the  $\alpha$ -fetoprotein promoter (Camper and Tilghman, 1989, *Genes Dev.* 3:537-546).

The invention further provides a recombinant expression vector comprising a DNA molecule of the invention cloned into the expression vector in an antisense 15 orientation. That is, the DNA molecule is operably linked to a regulatory sequence in a manner which allows for expression (by transcription of the DNA molecule) of an RNA molecule which is antisense to the mRNA encoding a polypeptide of the invention. Regulatory sequences operably linked to a nucleic acid cloned in the antisense orientation can be chosen which direct the continuous expression of the antisense RNA 20 molecule in a variety of cell types, for instance viral promoters and/or enhancers, or regulatory sequences can be chosen which direct constitutive, tissue-specific or cell type specific expression of antisense RNA. The antisense expression vector can be in the form of a recombinant plasmid, phagemid, or attenuated virus in which antisense nucleic acids are produced under the control of a high efficiency regulatory region, the activity 25 of which can be determined by the cell type into which the vector is introduced. For a discussion of the regulation of gene expression using antisense genes see Weintraub *et al.*, 1986, *Trends in Genetics*, Vol. 1(1).

Another aspect of the invention pertains to host cells into which a recombinant expression vector of the invention has been introduced. The terms "host cell" and 30 "recombinant host cell" are used interchangeably herein. It is understood that such terms refer not only to the particular subject cell but to the progeny or potential progeny of such a cell. Because certain modifications may occur in succeeding generations due to

either mutation or environmental influences, such progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term as used herein.

A host cell can be any prokaryotic (*e.g.*, *E. coli*) or eukaryotic cell (*e.g.*, insect cells, yeast or mammalian cells).

5        Vector DNA can be introduced into prokaryotic or eukaryotic cells via conventional transformation or transfection techniques. As used herein, the terms "transformation" and "transfection" are intended to refer to a variety of art-recognized techniques for introducing foreign nucleic acid into a host cell, including calcium phosphate or calcium chloride co-precipitation, DEAE-dextran-mediated transfection,  
10 lipofection, or electroporation. Suitable methods for transforming or transfecting host cells can be found in Sambrook, *et al.* (*supra*), and other laboratory manuals.

For stable transfection of mammalian cells, it is known that, depending upon the expression vector and transfection technique used, only a small fraction of cells may integrate the foreign DNA into their genome. In order to identify and select these  
15 integrants, a gene that encodes a selectable marker (*e.g.*, for resistance to antibiotics) is generally introduced into the host cells along with the gene of interest. Preferred selectable markers include those which confer resistance to drugs, such as G418, hygromycin and methotrexate. Cells stably transfected with the introduced nucleic acid can be identified by drug selection (*e.g.*, cells that have incorporated the selectable  
20 marker gene will survive, while the other cells die).

A host cell of the invention, such as a prokaryotic or eukaryotic host cell in culture, can be used to produce a polypeptide corresponding to a marker of the invention. Accordingly, the invention further provides methods for producing a polypeptide corresponding to a marker of the invention using the host cells of the  
25 invention. In one embodiment, the method comprises culturing the host cell of invention (into which a recombinant expression vector encoding a polypeptide of the invention has been introduced) in a suitable medium such that the marker is produced. In another embodiment, the method further comprises isolating the marker polypeptide from the medium or the host cell.

30        The host cells of the invention can also be used to produce nonhuman transgenic animals. For example, in one embodiment, a host cell of the invention is a fertilized oocyte or an embryonic stem cell into which a sequences encoding a polypeptide

corresponding to a marker of the invention have been introduced. Such host cells can then be used to create non-human transgenic animals in which exogenous sequences encoding a marker protein of the invention have been introduced into their genome or homologous recombinant animals in which endogenous gene(s) encoding a polypeptide  
5 corresponding to a marker of the invention sequences have been altered. Such animals are useful for studying the function and/or activity of the polypeptide corresponding to the marker and for identifying and/or evaluating modulators of polypeptide activity. As used herein, a "transgenic animal" is a non-human animal, preferably a mammal, more preferably a rodent such as a rat or mouse, in which one or more of the cells of the  
10 animal includes a transgene. Other examples of transgenic animals include non-human primates, sheep, dogs, cows, goats, chickens, amphibians, etc. A transgene is exogenous DNA which is integrated into the genome of a cell from which a transgenic animal develops and which remains in the genome of the mature animal, thereby directing the expression of an encoded gene product in one or more cell types or tissues of the  
15 transgenic animal. As used herein, an "homologous recombinant animal" is a non-human animal, preferably a mammal, more preferably a mouse, in which an endogenous gene has been altered by homologous recombination between the endogenous gene and an exogenous DNA molecule introduced into a cell of the animal, *e.g.*, an embryonic cell of the animal, prior to development of the animal.

20 A transgenic animal of the invention can be created by introducing a nucleic acid encoding a polypeptide corresponding to a marker of the invention into the male pronuclei of a fertilized oocyte, *e.g.*, by microinjection, retroviral infection, and allowing the oocyte to develop in a pseudopregnant female foster animal. Intronic sequences and polyadenylation signals can also be included in the transgene to increase the efficiency  
25 of expression of the transgene. A tissue-specific regulatory sequence(s) can be operably linked to the transgene to direct expression of the polypeptide of the invention to particular cells. Methods for generating transgenic animals via embryo manipulation and microinjection, particularly animals such as mice, have become conventional in the art and are described for example, in U.S. Patent Nos. 4,736,866 and 4,870,009, U.S.  
30 Patent No. 4,873,191 and in Hogan, *Manipulating the Mouse Embryo*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1986. Similar methods are used for production of other transgenic animals. A transgenic founder animal can be identified



based upon the presence of the transgene in its genome and/or expression of mRNA encoding the transgene in tissues or cells of the animals. A transgenic founder animal can then be used to breed additional animals carrying the transgene. Moreover, transgenic animals carrying the transgene can further be bred to other transgenic animals  
5 carrying other transgenes.

To create an homologous recombinant animal, a vector is prepared which contains at least a portion of a gene encoding a polypeptide corresponding to a marker of the invention into which a deletion, addition or substitution has been introduced to thereby alter, *e.g.*, functionally disrupt, the gene. In a preferred embodiment, the vector  
10 is designed such that, upon homologous recombination, the endogenous gene is functionally disrupted (*i.e.*, no longer encodes a functional protein; also referred to as a "knock out" vector). Alternatively, the vector can be designed such that, upon homologous recombination, the endogenous gene is mutated or otherwise altered but still encodes functional protein (*e.g.*, the upstream regulatory region can be altered to  
15 thereby alter the expression of the endogenous protein). In the homologous recombination vector, the altered portion of the gene is flanked at its 5' and 3' ends by additional nucleic acid of the gene to allow for homologous recombination to occur between the exogenous gene carried by the vector and an endogenous gene in an embryonic stem cell. The additional flanking nucleic acid sequences are of sufficient  
20 length for successful homologous recombination with the endogenous gene. Typically, several kilobases of flanking DNA (both at the 5' and 3' ends) are included in the vector (see, *e.g.*, Thomas and Capecchi, 1987, *Cell* 51:503 for a description of homologous recombination vectors). The vector is introduced into an embryonic stem cell line (*e.g.*, by electroporation) and cells in which the introduced gene has homologously  
25 recombined with the endogenous gene are selected (see, *e.g.*, Li *et al.*, 1992, *Cell* 69:915). The selected cells are then injected into a blastocyst of an animal (*e.g.*, a mouse) to form aggregation chimeras (see, *e.g.*, Bradley, *Teratocarcinomas and Embryonic Stem Cells: A Practical Approach*, Robertson, Ed., IRL, Oxford, 1987, pp. 113-152). A chimeric embryo can then be implanted into a suitable pseudopregnant  
30 female foster animal and the embryo brought to term. Progeny harboring the homologously recombined DNA in their germ cells can be used to breed animals in which all cells of the animal contain the homologously recombined DNA by germline

transmission of the transgene. Methods for constructing homologous recombination vectors and homologous recombinant animals are described further in Bradley (1991) *Current Opinion in Bio/Technology* 2:823-829 and in PCT Publication NOS. WO 90/11354, WO 91/01140, WO 92/0968, and WO 93/04169.

- 5 In another embodiment, transgenic non-human animals can be produced which contain selected systems which allow for regulated expression of the transgene. One example of such a system is the *cre/loxP* recombinase system of bacteriophage P1. For a description of the *cre/loxP* recombinase system, see, *e.g.*, Lakso *et al.* (1992) *Proc. Natl. Acad. Sci. USA* 89:6232-6236. Another example of a recombinase system is the
- 10 FLP recombinase system of *Saccharomyces cerevisiae* (O'Gorman *et al.*, 1991, *Science* 251:1351-1355). If a *cre/loxP* recombinase system is used to regulate expression of the transgene, animals containing transgenes encoding both the *Cre* recombinase and a selected protein are required. Such animals can be provided through the construction of "double" transgenic animals, *e.g.*, by mating two transgenic animals, one containing a
- 15 transgene encoding a selected protein and the other containing a transgene encoding a recombinase.

Clones of the non-human transgenic animals described herein can also be produced according to the methods described in Wilmut *et al.* (1997) *Nature* 385:810-813 and PCT Publication NOS. WO 97/07668 and WO 97/07669.

20

#### IV. Pharmaceutical Compositions

- The nucleic acid molecules, polypeptides, and antibodies (also referred to herein as "active compounds") corresponding to a marker of the invention can be incorporated into pharmaceutical compositions suitable for administration. Such compositions
- 25 typically comprise the nucleic acid molecule, protein, or antibody and a pharmaceutically acceptable carrier. As used herein the language "pharmaceutically acceptable carrier" is intended to include any and all solvents, dispersion media, coatings, antibacterial and antifungal agents, isotonic and absorption delaying agents, and the like, compatible with pharmaceutical administration. The use of such media and
- 30 agents for pharmaceutically active substances is well known in the art. Except insofar as any conventional media or agent is incompatible with the active compound, use thereof

in the compositions is contemplated. Supplementary active compounds can also be incorporated into the compositions.

The invention includes methods for preparing pharmaceutical compositions for modulating the expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention. Such methods comprise formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention. Such compositions can further include additional active agents. Thus, the invention further includes methods for preparing a pharmaceutical composition by formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention and one or more additional active compounds.

The invention also provides methods (also referred to herein as "screening assays") for identifying modulators, *i.e.*, candidate or test compounds or agents (*e.g.*, peptides, peptidomimetics, peptoids, small molecules or other drugs) which (a) bind to the marker, or (b) have a modulatory (*e.g.*, stimulatory or inhibitory) effect on the activity of the marker or, more specifically, (c) have a modulatory effect on the interactions of the marker with one or more of its natural substrates (*e.g.*, peptide, protein, hormone, co-factor, or nucleic acid), or (d) have a modulatory effect on the expression of the marker. Such assays typically comprise a reaction between the marker and one or more assay components. The other components may be either the test compound itself, or a combination of test compound and a natural binding partner of the marker.

The test compounds of the present invention may be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. Test compounds may also be obtained by any of the numerous approaches in combinatorial library methods known in the art, including: biological libraries; peptoid libraries (libraries of molecules having the functionalities of peptides, but with a novel, non-peptide backbone which are resistant to enzymatic degradation but which nevertheless remain bioactive; see, *e.g.*, Zuckermann *et al.*, 1994, *J. Med. Chem.* 37:2678-85); spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the 'one-bead one-compound' library method; and

synthetic library methods using affinity chromatography selection. The biological library and peptoid library approaches are limited to peptide libraries, while the other four approaches are applicable to peptide, non-peptide oligomer or small molecule libraries of compounds (Lam, 1997, *Anticancer Drug Des.* 12:145).

- 5           Examples of methods for the synthesis of molecular libraries can be found in the art, for example in: DeWitt *et al.* (1993) *Proc. Natl. Acad. Sci. U.S.A.* 90:6909; Erb *et al.* (1994) *Proc. Natl. Acad. Sci. USA* 91:11422; Zuckermann *et al.* (1994). *J. Med. Chem.* 37:2678; Cho *et al.* (1993) *Science* 261:1303; Carrell *et al.* (1994) *Angew. Chem. Int. Ed. Engl.* 33:2059; Carell *et al.* (1994) *Angew. Chem. Int. Ed. Engl.* 33:2061; and in  
10 Gallop *et al.* (1994) *J. Med. Chem.* 37:1233.

- Libraries of compounds may be presented in solution (*e.g.*, Houghten, 1992, *Biotechniques* 13:412-421), or on beads (Lam, 1991, *Nature* 354:82-84), chips (Fodor, 1993, *Nature* 364:555-556), bacteria and/or spores, (Ladner, USP 5,223,409), plasmids (Cull *et al.*, 1992, *Proc Natl Acad Sci USA* 89:1865-1869) or on phage (Scott and Smith,  
15 1990, *Science* 249:386-390; Devlin, 1990, *Science* 249:404-406; Cwirla *et al.*, 1990, *Proc. Natl. Acad. Sci.* 87:6378-6382; Felici, 1991, *J. Mol. Biol.* 222:301-310; Ladner, *supra.*).

- In one embodiment, the invention provides assays for screening candidate or test compounds which are substrates of a marker or biologically active portion thereof. In  
20 another embodiment, the invention provides assays for screening candidate or test compounds which bind to a marker or biologically active portion thereof. Determining the ability of the test compound to directly bind to a marker can be accomplished, for example, by coupling the compound with a radioisotope or enzymatic label such that binding of the compound to the marker can be determined by detecting the labeled  
25 marker compound in a complex. For example, compounds (*e.g.*, marker substrates) can be labeled with  $^{125}\text{I}$ ,  $^{35}\text{S}$ ,  $^{14}\text{C}$ , or  $^3\text{H}$ , either directly or indirectly, and the radioisotope detected by direct counting of radioemission or by scintillation counting. Alternatively, assay components can be enzymatically labeled with, for example, horseradish peroxidase, alkaline phosphatase, or luciferase, and the enzymatic label detected by  
30 determination of conversion of an appropriate substrate to product.

In another embodiment, the invention provides assays for screening candidate or test compounds which modulate the activity of a marker or a biologically active portion thereof. In all likelihood, the marker can, *in vivo*, interact with one or more molecules, such as but not limited to, peptides, proteins, hormones, cofactors and nucleic acids. For the purposes of this discussion, such cellular and extracellular molecules are referred to herein as "binding partners" or marker "substrate".

One necessary embodiment of the invention in order to facilitate such screening is the use of the marker to identify its natural *in vivo* binding partners. There are many ways to accomplish this which are known to one skilled in the art. One example is the use of the marker protein as "bait protein" in a two-hybrid assay or three-hybrid assay (see, e.g., U.S. Patent No. 5,283,317; Zervos *et al*, 1993, *Cell* 72:223-232; Madura *et al*, 1993, *J. Biol. Chem.* 268:12046-12054; Bartel *et al*, 1993, *Biotechniques* 14:920-924; Iwabuchi *et al*, 1993 *Oncogene* 8:1693-1696; Brent WO94/10300) in order to identify other proteins which bind to or interact with the marker (binding partners) and, therefore, are possibly involved in the natural function of the marker. Such marker binding partners are also likely to be involved in the propagation of signals by the marker or downstream elements of a marker-mediated signaling pathway. Alternatively, such marker binding partners may also be found to be inhibitors of the marker.

The two-hybrid system is based on the modular nature of most transcription factors, which consist of separable DNA-binding and activation domains. Briefly, the assay utilizes two different DNA constructs. In one construct, the gene that encodes a marker protein fused to a gene encoding the DNA binding domain of a known transcription factor (e.g., GAL-4). In the other construct, a DNA sequence, from a library of DNA sequences, that encodes an unidentified protein ("prey" or "sample") is fused to a gene that codes for the activation domain of the known transcription factor. If the "bait" and the "prey" proteins are able to interact, *in vivo*, forming a marker-dependent complex, the DNA-binding and activation domains of the transcription factor are brought into close proximity. This proximity allows transcription of a reporter gene (e.g., LacZ) which is operably linked to a transcriptional regulatory site responsive to the transcription factor. Expression of the reporter gene can be readily detected and cell colonies containing the functional transcription factor can be isolated and used to obtain the cloned gene which encodes the protein which interacts with the marker protein.

In a further embodiment, assays may be devised through the use of the invention for the purpose of identifying compounds which modulate (*e.g.*, affect either positively or negatively) interactions between a marker and its substrates and/or binding partners. Such compounds can include, but are not limited to, molecules such as antibodies, peptides, hormones, oligonucleotides, nucleic acids, and analogs thereof. Such compounds may also be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. The preferred assay components for use in this embodiment is an prostate cancer marker identified herein, the known binding partner and/or substrate of same, and the test compound. Test compounds can be supplied from any source.

The basic principle of the assay systems used to identify compounds that interfere with the interaction between the marker and its binding partner involves preparing a reaction mixture containing the marker and its binding partner under conditions and for a time sufficient to allow the two products to interact and bind, thus forming a complex. In order to test an agent for inhibitory activity, the reaction mixture is prepared in the presence and absence of the test compound. The test compound can be initially included in the reaction mixture, or can be added at a time subsequent to the addition of the marker and its binding partner. Control reaction mixtures are incubated without the test compound or with a placebo. The formation of any complexes between the marker and its binding partner is then detected. The formation of a complex in the control reaction, but less or no such formation in the reaction mixture containing the test compound, indicates that the compound interferes with the interaction of the marker and its binding partner. Conversely, the formation of more complex in the presence of compound than in the control reaction indicates that the compound may enhance interaction of the marker and its binding partner.

The assay for compounds that interfere with the interaction of the marker with its binding partner may be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring either the marker or its binding partner onto a solid phase and detecting complexes anchored to the solid phase at the end of the reaction. In homogeneous assays, the entire reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that

interfere with the interaction between the markers and the binding partners (*e.g.*, by competition) can be identified by conducting the reaction in the presence of the test substance, *i.e.*, by adding the test substance to the reaction mixture prior to or simultaneously with the marker and its interactive binding partner. Alternatively, test compounds that disrupt preformed complexes, *e.g.*, compounds with higher binding constants that displace one of the components from the complex, can be tested by adding the test compound to the reaction mixture after complexes have been formed. The various formats are briefly described below.

In a heterogeneous assay system, either the marker or its binding partner is anchored onto a solid surface or matrix, while the other corresponding non-anchored component may be labeled, either directly or indirectly. In practice, microtitre plates are often utilized for this approach. The anchored species can be immobilized by a number of methods, either non-covalent or covalent, that are typically well known to one who practices the art. Non-covalent attachment can often be accomplished simply by coating the solid surface with a solution of the marker or its binding partner and drying. Alternatively, an immobilized antibody specific for the assay component to be anchored can be used for this purpose. Such surfaces can often be prepared in advance and stored.

In related embodiments, a fusion protein can be provided which adds a domain that allows one or both of the assay components to be anchored to a matrix. For example, glutathione-S-transferase/marker fusion proteins or glutathione-S-transferase/binding partner can be adsorbed onto glutathione sepharose beads (Sigma Chemical, St. Louis, MO) or glutathione derivatized microtiter plates, which are then combined with the test compound or the test compound and either the non-adsorbed marker or its binding partner, and the mixture incubated under conditions conducive to complex formation (*e.g.*, physiological conditions). Following incubation, the beads or microtiter plate wells are washed to remove any unbound assay components, the immobilized complex assessed either directly or indirectly, for example, as described above. Alternatively, the complexes can be dissociated from the matrix, and the level of marker binding or activity determined using standard techniques.

Other techniques for immobilizing proteins on matrices can also be used in the screening assays of the invention. For example, either a marker or a marker binding partner can be immobilized utilizing conjugation of biotin and streptavidin. Biotinylated

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marker protein or target molecules can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (*e.g.*, biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the protein-immobilized surfaces can be prepared in  
5 advance and stored.

In order to conduct the assay, the corresponding partner of the immobilized assay component is exposed to the coated surface with or without the test compound. After the reaction is complete, unreacted assay components are removed (*e.g.*, by washing) and any complexes formed will remain immobilized on the solid surface. The detection  
10 of complexes anchored on the solid surface can be accomplished in a number of ways. Where the non-immobilized component is pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the non-immobilized component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; *e.g.*, using a labeled antibody specific for the  
15 initially non-immobilized species (the antibody, in turn, can be directly labeled or indirectly labeled with, *e.g.*, a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which modulate (inhibit or enhance) complex formation or which disrupt preformed complexes can be detected.

In an alternate embodiment of the invention, a homogeneous assay may be used.  
20 This is typically a reaction, analogous to those mentioned above, which is conducted in a liquid phase in the presence or absence of the test compound. The formed complexes are then separated from unreacted components, and the amount of complex formed is determined. As mentioned for heterogeneous assay systems, the order of addition of reactants to the liquid phase can yield information about which test compounds  
25 modulate (inhibit or enhance) complex formation and which disrupt preformed complexes.

In such a homogeneous assay, the reaction products may be separated from unreacted assay components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and  
30 immunoprecipitation. In differential centrifugation, complexes of molecules may be separated from uncomplexed molecules through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and



densities (see, for example, Rivas, G., and Minton, A.P., *Trends Biochem Sci* 1993 Aug;18(8):284-7). Standard chromatographic techniques may also be utilized to separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the relatively different charge properties of the complex as compared to the uncomplexed molecules may be exploited to differentially separate the complex from the remaining individual reactants, for example through the use of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, e.g., Heegaard, 1998, *J Mol. Recognit.* 11:141-148; Hage and Tweed, 1997, *J. Chromatogr. B. Biomed. Sci. Appl.*, 699:499-525). Gel electrophoresis may also be employed to separate complexed molecules from unbound species (see, e.g., Ausubel *et al* (eds.), In: *Current Protocols in Molecular Biology*, J. Wiley & Sons, New York. 1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, nondenaturing gels in the absence of reducing agent are typically preferred, but conditions appropriate to the particular interactants will be well known to one skilled in the art. Immunoprecipitation is another common technique utilized for the isolation of a protein-protein complex from solution (see, e.g., Ausubel *et al* (eds.), In: *Current Protocols in Molecular Biology*, J. Wiley & Sons, New York. 1999). In this technique, all proteins binding to an antibody specific to one of the binding molecules are precipitated from solution by conjugating the antibody to a polymer bead that may be readily collected by centrifugation. The bound assay components are released from the beads (through a specific proteolysis event or other technique well known in the art which will not disturb the protein-protein interaction in the complex), and a second immunoprecipitation step is performed, this time utilizing antibodies specific for the correspondingly different interacting assay component. In this manner, only formed complexes should remain attached to the beads. Variations in complex formation in both the presence and the absence of a test compound can be compared, thus offering information about the ability of the compound to modulate interactions between the marker and its binding partner.

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within the scope of the present invention are methods for direct detection of interaction between the marker and its natural binding partner and/or a test compound in a homogeneous or heterogeneous assay system without further sample manipulation. For example, the technique of fluorescence energy transfer may be utilized (see, *e.g.*, Lakowicz *et al*, U.S. Patent No. 5,631,169; Stavrianopoulos *et al*, U.S. Patent No. 4,868,103). Generally, this technique involves the addition of a fluorophore label on a first 'donor' molecule (*e.g.*, marker or test compound) such that its emitted fluorescent energy will be absorbed by a fluorescent label on a second, 'acceptor' molecule (*e.g.*, marker or test compound), which in turn is able to fluoresce due to the absorbed energy.

Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (*e.g.*, using a fluorimeter). A test substance which either enhances or hinders participation of one of the species in the preformed complex will result in the generation of a signal variant to that of background. In this way, test substances that modulate interactions between a marker and its binding partner can be identified in controlled assays.

In another embodiment, modulators of marker expression are identified in a method wherein a cell is contacted with a candidate compound and the expression of mRNA or protein, corresponding to a marker in the cell, is determined. The level of expression of mRNA or protein in the presence of the candidate compound is compared to the level of expression of mRNA or protein in the absence of the candidate compound. The candidate compound can then be identified as a modulator of marker expression based on this comparison. For example, when expression of marker mRNA or protein is greater (statistically significantly greater) in the presence of the candidate compound than in its absence, the candidate compound is identified as a stimulator of marker mRNA or protein expression. Conversely, when expression of marker mRNA or

protein is less (statistically significantly less) in the presence of the candidate compound than in its absence, the candidate compound is identified as an inhibitor of marker mRNA or protein expression. The level of marker mRNA or protein expression in the cells can be determined by methods described herein for detecting marker mRNA or  
5 protein.

In another aspect, the invention pertains to a combination of two or more of the assays described herein. For example, a modulating agent can be identified using a cell-based or a cell free assay, and the ability of the agent to modulate the activity of a marker protein can be further confirmed *in vivo*, *e.g.*, in a whole animal model for  
10 cellular transformation and/or tumorigenesis.

This invention further pertains to novel agents identified by the above-described screening assays. Accordingly, it is within the scope of this invention to further use an agent identified as described herein in an appropriate animal model. For example, an agent identified as described herein (*e.g.*, an marker modulating agent, an antisense  
15 marker nucleic acid molecule, an marker-specific antibody, or an marker-binding partner) can be used in an animal model to determine the efficacy, toxicity, or side effects of treatment with such an agent. Alternatively, an agent identified as described herein can be used in an animal model to determine the mechanism of action of such an agent. Furthermore, this invention pertains to uses of novel agents identified by the  
20 above-described screening assays for treatments as described herein.

It is understood that appropriate doses of small molecule agents and protein or polypeptide agents depends upon a number of factors within the knowledge of the ordinarily skilled physician, veterinarian, or researcher. The dose(s) of these agents will vary, for example, depending upon the identity, size, and condition of the subject or  
25 sample being treated, further depending upon the route by which the composition is to be administered, if applicable, and the effect which the practitioner desires the agent to have upon the nucleic acid or polypeptide of the invention. Exemplary doses of a small molecule include milligram or microgram amounts per kilogram of subject or sample weight (*e.g.* about 1 microgram per kilogram to about 500 milligrams per kilogram,  
30 about 100 micrograms per kilogram to about 5 milligrams per kilogram, or about 1 microgram per kilogram to about 50 micrograms per kilogram). Exemplary doses of a protein or polypeptide include gram, milligram or microgram amounts per kilogram of

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subject or sample weight (*e.g.* about 1 microgram per kilogram to about 5 grams per kilogram, about 100 micrograms per kilogram to about 500 milligrams per kilogram, or about 1 milligram per kilogram to about 50 milligrams per kilogram). It is furthermore understood that appropriate doses of one of these agents depend upon the potency of the agent with respect to the expression or activity to be modulated. Such appropriate doses  
5 can be determined using the assays described herein. When one or more of these agents is to be administered to an animal (*e.g.* a human) in order to modulate expression or activity of a polypeptide or nucleic acid of the invention, a physician, veterinarian, or researcher can, for example, prescribe a relatively low dose at first, subsequently  
10 increasing the dose until an appropriate response is obtained. In addition, it is understood that the specific dose level for any particular animal subject will depend upon a variety of factors including the activity of the specific agent employed, the age, body weight, general health, gender, and diet of the subject, the time of administration, the route of administration, the rate of excretion, any drug combination, and the degree  
15 of expression or activity to be modulated.

A pharmaceutical composition of the invention is formulated to be compatible with its intended route of administration. Examples of routes of administration include parenteral, *e.g.*, intravenous, intradermal, subcutaneous, oral (*e.g.*, inhalation), transdermal (topical), transmucosal, and rectal administration. Solutions or suspensions  
20 used for parenteral, intradermal, or subcutaneous application can include the following components: a sterile diluent such as water for injection, saline solution, fixed oils, polyethylene glycols, glycerine, propylene glycol or other synthetic solvents; antibacterial agents such as benzyl alcohol or methyl parabens; antioxidants such as ascorbic acid or sodium bisulfite; chelating agents such as ethylenediamine-tetraacetic  
25 acid; buffers such as acetates, citrates or phosphates and agents for the adjustment of tonicity such as sodium chloride or dextrose. pH can be adjusted with acids or bases, such as hydrochloric acid or sodium hydroxide. The parenteral preparation can be enclosed in ampules, disposable syringes or multiple dose vials made of glass or plastic.

Pharmaceutical compositions suitable for injectable use include sterile aqueous  
30 solutions (where water soluble) or dispersions and sterile powders for the extemporaneous preparation of sterile injectable solutions or dispersions. For intravenous administration, suitable carriers include physiological saline, bacteriostatic

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water, Cremophor EL (BASF; Parsippany, NJ) or phosphate buffered saline (PBS). In all cases, the composition must be sterile and should be fluid to the extent that easy syringability exists. It must be stable under the conditions of manufacture and storage and must be preserved against the contaminating action of microorganisms such as

5 bacteria and fungi. The carrier can be a solvent or dispersion medium containing, for example, water, ethanol, polyol (for example, glycerol, propylene glycol, and liquid polyethylene glycol, and the like), and suitable mixtures thereof. The proper fluidity can be maintained, for example, by the use of a coating such as lecithin, by the maintenance of the required particle size in the case of dispersion and by the use of surfactants.

10 Prevention of the action of microorganisms can be achieved by various antibacterial and antifungal agents, for example, parabens, chlorobutanol, phenol, ascorbic acid, thimerosal, and the like. In many cases, it will be preferable to include isotonic agents, for example, sugars, polyalcohols such as mannitol, sorbitol, or sodium chloride in the composition. Prolonged absorption of the injectable compositions can be brought about

15 by including in the composition an agent which delays absorption, for example, aluminum monostearate and gelatin.

Sterile injectable solutions can be prepared by incorporating the active compound (*e.g.*, a polypeptide or antibody) in the required amount in an appropriate solvent with one or a combination of ingredients enumerated above, as required,

20 followed by filtered sterilization. Generally, dispersions are prepared by incorporating the active compound into a sterile vehicle which contains a basic dispersion medium, and then incorporating the required other ingredients from those enumerated above. In the case of sterile powders for the preparation of sterile injectable solutions, the preferred methods of preparation are vacuum drying and freeze-drying which yields a

25 powder of the active ingredient plus any additional desired ingredient from a previously sterile-filtered solution thereof.

Oral compositions generally include an inert diluent or an edible carrier. They can be enclosed in gelatin capsules or compressed into tablets. For the purpose of oral therapeutic administration, the active compound can be incorporated with excipients and

30 used in the form of tablets, troches, or capsules. Oral compositions can also be prepared using a fluid carrier for use as a mouthwash, wherein the compound in the fluid carrier is applied orally and swished and expectorated or swallowed.

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Pharmaceutically compatible binding agents, and/or adjuvant materials can be included as part of the composition. The tablets, pills, capsules, troches, and the like can contain any of the following ingredients, or compounds of a similar nature: a binder such as microcrystalline cellulose, gum tragacanth or gelatin; an excipient such as starch or lactose, a disintegrating agent such as alginic acid, Primogel, or corn starch; a lubricant  
5 such as magnesium stearate or Sterotes; a glidant such as colloidal silicon dioxide; a sweetening agent such as sucrose or saccharin; or a flavoring agent such as peppermint, methyl salicylate, or orange flavoring.

For administration by inhalation, the compounds are delivered in the form of an  
10 aerosol spray from a pressurized container or dispenser which contains a suitable propellant, *e.g.*, a gas such as carbon dioxide, or a nebulizer.

Systemic administration can also be by transmucosal or transdermal means. For transmucosal or transdermal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art,  
15 and include, for example, for transmucosal administration, detergents, bile salts, and fusidic acid derivatives. Transmucosal administration can be accomplished through the use of nasal sprays or suppositories. For transdermal administration, the active compounds are formulated into ointments, salves, gels, or creams as generally known in the art.

20 The compounds can also be prepared in the form of suppositories (*e.g.*, with conventional suppository bases such as cocoa butter and other glycerides) or retention enemas for rectal delivery.

In one embodiment, the active compounds are prepared with carriers that will protect the compound against rapid elimination from the body, such as a controlled  
25 release formulation, including implants and microencapsulated delivery systems. Biodegradable, biocompatible polymers can be used, such as ethylene vinyl acetate, polyanhydrides, polyglycolic acid, collagen, polyorthoesters, and polylactic acid. Methods for preparation of such formulations will be apparent to those skilled in the art. The materials can also be obtained commercially from Alza Corporation and Nova  
30 Pharmaceuticals, Inc. Liposomal suspensions (including liposomes having monoclonal antibodies incorporated therein or thereon) can also be used as pharmaceutically

acceptable carriers. These can be prepared according to methods known to those skilled in the art, for example, as described in U.S. Patent No. 4,522,811.

It is especially advantageous to formulate oral or parenteral compositions in dosage unit form for ease of administration and uniformity of dosage. Dosage unit form  
5 as used herein refers to physically discrete units suited as unitary dosages for the subject to be treated; each unit containing a predetermined quantity of active compound calculated to produce the desired therapeutic effect in association with the required pharmaceutical carrier. The specification for the dosage unit forms of the invention are dictated by and directly dependent on the unique characteristics of the active compound  
10 and the particular therapeutic effect to be achieved, and the limitations inherent in the art of compounding such an active compound for the treatment of individuals.

For antibodies, the preferred dosage is 0.1 mg/kg to 100 mg/kg of body weight (generally 10 mg/kg to 20 mg/kg). If the antibody is to act in the brain, a dosage of 50 mg/kg to 100 mg/kg is usually appropriate. Generally, partially human antibodies and  
15 fully human antibodies have a longer half-life within the human body than other antibodies. Accordingly, lower dosages and less frequent administration is often possible. Modifications such as lipidation can be used to stabilize antibodies and to enhance uptake and tissue penetration (*e.g.*, into the prostate epithelium). A method for lipidation of antibodies is described by Cruikshank *et al.* (1997) *J. Acquired Immune*  
20 *Deficiency Syndromes and Human Retrovirology* 14:193.

The nucleic acid molecules corresponding to a marker of the invention can be inserted into vectors and used as gene therapy vectors. Gene therapy vectors can be delivered to a subject by, for example, intravenous injection, local administration (U.S. Patent 5,328,470), or by stereotactic injection (see, *e.g.*, Chen *et al.*, 1994, *Proc. Natl.*  
25 *Acad. Sci. USA* 91:3054-3057). The pharmaceutical preparation of the gene therapy vector can include the gene therapy vector in an acceptable diluent, or can comprise a slow release matrix in which the gene delivery vehicle is imbedded. Alternatively, where the complete gene delivery vector can be produced intact from recombinant cells, *e.g.* retroviral vectors, the pharmaceutical preparation can include one or more cells  
30 which produce the gene delivery system.

The pharmaceutical compositions can be included in a container, pack, or dispenser together with instructions for administration.

#### V. Computer Readable Means and Arrays

5 Computer readable media comprising a marker(s) of the present invention is also provided. As used herein, "computer readable media" refers to any medium that can be read and accessed directly by a computer. Such media include, but are not limited to: magnetic storage media, such as floppy discs, hard disc storage medium, and magnetic tape; optical storage media such as CD-ROM; electrical storage media such as RAM and  
10 ROM; and hybrids of these categories such as magnetic/optical storage media. The skilled artisan will readily appreciate how any of the presently known computer readable mediums can be used to create a manufacture comprising computer readable medium having recorded thereon a marker of the present invention.

As used herein, "recorded" refers to a process for storing information on  
15 computer readable medium. Those skilled in the art can readily adopt any of the presently known methods for recording information on computer readable medium to generate manufactures comprising the markers of the present invention.

A variety of data processor programs and formats can be used to store the marker information of the present invention on computer readable medium. For example, the  
20 nucleic acid sequence corresponding to the markers can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and MicroSoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like. Any number of dataprocessor structuring formats (e.g., text file or database) may be adapted in order to obtain  
25 computer readable medium having recorded thereon the markers of the present invention.

By providing the markers of the invention in computer readable form, one can routinely access the marker sequence information for a variety of purposes. For example, one skilled in the art can use the nucleotide or amino acid sequences of the  
30 invention in computer readable form to compare a target sequence or target structural motif with the sequence information stored within the data storage means. Search



means are used to identify fragments or regions of the sequences of the invention which match a particular target sequence or target motif.

The invention also includes an array comprising a marker(s) of the present invention. The array can be used to assay expression of one or more genes in the array.

- 5 In one embodiment, the array can be used to assay gene expression in a tissue to ascertain tissue specificity of genes in the array. In this manner, up to about 7600 genes can be simultaneously assayed for expression. This allows a profile to be developed showing a battery of genes specifically expressed in one or more tissues.

- In addition to such qualitative determination, the invention allows the
- 10 quantitation of gene expression. Thus, not only tissue specificity, but also the level of expression of a battery of genes in the tissue is ascertainable. Thus, genes can be grouped on the basis of their tissue expression *per se* and level of expression in that tissue. This is useful, for example, in ascertaining the relationship of gene expression between or among tissues. Thus, one tissue can be perturbed and the effect on gene
- 15 expression in a second tissue can be determined. In this context, the effect of one cell type on another cell type in response to a biological stimulus can be determined. Such a determination is useful, for example, to know the effect of cell-cell interaction at the level of gene expression. If an agent is administered therapeutically to treat one cell type but has an undesirable effect on another cell type, the invention provides an assay
- 20 to determine the molecular basis of the undesirable effect and thus provides the opportunity to co-administer a counteracting agent or otherwise treat the undesired effect. Similarly, even within a single cell type, undesirable biological effects can be determined at the molecular level. Thus, the effects of an agent on expression of other than the target gene can be ascertained and counteracted.

- 25 In another embodiment, the array can be used to monitor the time course of expression of one or more genes in the array. This can occur in various biological contexts, as disclosed herein, for example development and differentiation, tumor progression, progression of other diseases, *in vitro* processes, such a cellular transformation and senescence, autonomic neural and neurological processes, such as,
- 30 for example, pain and appetite, and cognitive functions, such as learning or memory.

The array is also useful for ascertaining the effect of the expression of a gene on the expression of other genes in the same cell or in different cells. This provides, for example, for a selection of alternate molecular targets for therapeutic intervention if the ultimate or downstream target cannot be regulated.

5       The array is also useful for ascertaining differential expression patterns of one or more genes in normal and abnormal cells. This provides a battery of genes that could serve as a molecular target for diagnosis or therapeutic intervention.

## VI. Predictive Medicine

10       The present invention pertains to the field of predictive medicine in which diagnostic assays, prognostic assays, pharmacogenomics, and monitoring clinical trails are used for prognostic (predictive) purposes to thereby treat an individual prophylactically. Accordingly, one aspect of the present invention relates to diagnostic assays for determining the level of expression of polypeptides or nucleic acids  
15       corresponding to one or more markers of the invention, in order to determine whether an individual is at risk of developing prostate cancer. Such assays can be used for prognostic or predictive purposes to thereby prophylactically treat an individual prior to the onset of the cancer.

Yet another aspect of the invention pertains to monitoring the influence of agents  
20       (e.g., drugs or other compounds administered either to inhibit prostate cancer or to treat or prevent any other disorder {i.e. in order to understand any prostate carcinogenic effects that such treatment may have} ) on the expression or activity of a marker of the invention in clinical trials. These and other agents are described in further detail in the following sections.

25

### A. Diagnostic Assays

An exemplary method for detecting the presence or absence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample involves obtaining a biological sample (e.g. a prostate smear) from a test subject and contacting  
30       the biological sample with a compound or an agent capable of detecting the polypeptide or nucleic acid (e.g., mRNA, genomic DNA, or cDNA). The detection methods of the invention can thus be used to detect mRNA, protein, cDNA, or genomic DNA, for

example, in a biological sample *in vitro* as well as *in vivo*. For example, *in vitro* techniques for detection of mRNA include Northern hybridizations and *in situ* hybridizations. *In vitro* techniques for detection of a polypeptide corresponding to a marker of the invention include enzyme linked immunosorbent assays (ELISAs),  
5 Western blots, immunoprecipitations, immunohistochemistry and immunofluorescence. *In vitro* techniques for detection of genomic DNA include Southern hybridizations. Furthermore, *in vivo* techniques for detection of a polypeptide corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the polypeptide. For example, the antibody can be labeled with a radioactive marker whose  
10 presence and location in a subject can be detected by standard imaging techniques.

A general principle of such diagnostic and prognostic assays involves preparing a sample or reaction mixture that may contain a marker, and a probe, under appropriate conditions and for a time sufficient to allow the marker and probe to interact and bind, thus forming a complex that can be removed and/or detected in the reaction mixture.

15 These assays can be conducted in a variety of ways.

For example, one method to conduct such an assay would involve anchoring the marker or probe onto a solid phase support, also referred to as a substrate, and detecting target marker/probe complexes anchored on the solid phase at the end of the reaction. In one embodiment of such a method, a sample from a subject, which is to be assayed for  
20 presence and/or concentration of marker, can be anchored onto a carrier or solid phase support. In another embodiment, the reverse situation is possible, in which the probe can be anchored to a solid phase and a sample from a subject can be allowed to react as an unanchored component of the assay.

There are many established methods for anchoring assay components to a solid  
25 phase. These include, without limitation, marker or probe molecules which are immobilized through conjugation of biotin and streptavidin. Such biotinylated assay components can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (e.g., biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In  
30 certain embodiments, the surfaces with immobilized assay components can be prepared in advance and stored.

Other suitable carriers or solid phase supports for such assays include any material capable of binding the class of molecule to which the marker or probe belongs. Well-known supports or carriers include, but are not limited to, glass, polystyrene, nylon, polypropylene, nylon, polyethylene, dextran, amylases, natural and modified  
5 celluloses, polyacrylamides, gabbros, and magnetite.

In order to conduct assays with the above mentioned approaches, the non-immobilized component is added to the solid phase upon which the second component is anchored. After the reaction is complete, uncomplexed components may be removed (*e.g.*, by washing) under conditions such that any complexes formed will remain  
10 immobilized upon the solid phase. The detection of marker/probe complexes anchored to the solid phase can be accomplished in a number of methods outlined herein.

In a preferred embodiment, the probe, when it is the unanchored assay component, can be labeled for the purpose of detection and readout of the assay, either directly or indirectly, with detectable labels discussed herein and which are well-known  
15 to one skilled in the art.

It is also possible to directly detect marker/probe complex formation without further manipulation or labeling of either component (marker or probe), for example by utilizing the technique of fluorescence energy transfer (*see, for example, Lakowicz et al., U.S. Patent No. 5,631,169; Stavrianopoulos, et al., U.S. Patent No. 4,868,103*). A  
20 fluorophore label on the first, 'donor' molecule is selected such that, upon excitation with incident light of appropriate wavelength, its emitted fluorescent energy will be absorbed by a fluorescent label on a second 'acceptor' molecule, which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen  
25 that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay  
30 should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (*e.g.*, using a fluorimeter).

In another embodiment, determination of the ability of a probe to recognize a marker can be accomplished without labeling either assay component (probe or marker) by utilizing a technology such as real-time Biomolecular Interaction Analysis (BIA) (see, *e.g.*, Sjolander, S. and Urbaniczky, C., 1991, *Anal. Chem.* 63:2338-2345 and Szabo *et al.*, 1995, *Curr. Opin. Struct. Biol.* 5:699-705). As used herein, "BIA" or "surface plasmon resonance" is a technology for studying biospecific interactions in real time, without labeling any of the interactants (*e.g.*, BIAcore). Changes in the mass at the binding surface (indicative of a binding event) result in alterations of the refractive index of light near the surface (the optical phenomenon of surface plasmon resonance (SPR)), resulting in a detectable signal which can be used as an indication of real-time reactions between biological molecules.

Alternatively, in another embodiment, analogous diagnostic and prognostic assays can be conducted with marker and probe as solutes in a liquid phase. In such an assay, the complexed marker and probe are separated from uncomplexed components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In differential centrifugation, marker/probe complexes may be separated from uncomplexed assay components through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., 1993, *Trends Biochem Sci.* 18(8):284-7). Standard chromatographic techniques may also be utilized to separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the relatively different charge properties of the marker/probe complex as compared to the uncomplexed components may be exploited to differentiate the complex from uncomplexed components, for example through the utilization of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, *e.g.*, Heegaard, N.H., 1998, *J. Mol. Recognit.* Winter 11(1-6):14\_\_\_; Hage, D.S., and Tweed, S.A. *J Chromatogr B Biomed Sci Appl* 1997 Oct 10;699(1-2):499-525). Gel electrophoresis may also be employed to separate complexed

assay components from unbound components (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York, 1987-1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, 5 non-denaturing gel matrix materials and conditions in the absence of reducing agent are typically preferred. Appropriate conditions to the particular assay and components thereof will be well known to one skilled in the art.

In a particular embodiment, the level of mRNA corresponding to the marker can be determined both by *in situ* and by *in vitro* formats in a biological sample using 10 methods known in the art. The term "biological sample" is intended to include tissues, cells, biological fluids and isolates thereof, isolated from a subject, as well as tissues, cells and fluids present within a subject. Many expression detection methods use isolated RNA. For *in vitro* methods, any RNA isolation technique that does not select against the isolation of mRNA can be utilized for the purification of RNA from prostate 15 cells (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York 1987-1999). Additionally, large numbers of tissue samples can readily be processed using techniques well known to those of skill in the art, such as, for example, the single-step RNA isolation process of Chomczynski (1989, U.S. Patent No. 4,843,155).

20 The isolated mRNA can be used in hybridization or amplification assays that include, but are not limited to, Southern or Northern analyses, polymerase chain reaction analyses and probe arrays. One preferred diagnostic method for the detection of mRNA levels involves contacting the isolated mRNA with a nucleic acid molecule (probe) that can hybridize to the mRNA encoded by the gene being detected. The nucleic acid probe 25 can be, for example, a full-length cDNA, or a portion thereof, such as an oligonucleotide of at least 7, 15, 30, 50, 100, 250 or 500 nucleotides in length and sufficient to specifically hybridize under stringent conditions to a mRNA or genomic DNA encoding a marker of the present invention. Other suitable probes for use in the diagnostic assays of the invention are described herein. Hybridization of an mRNA with the probe 30 indicates that the marker in question is being expressed.

In one format, the mRNA is immobilized on a solid surface and contacted with a probe, for example by running the isolated mRNA on an agarose gel and transferring the mRNA from the gel to a membrane, such as nitrocellulose. In an alternative format, the probe(s) are immobilized on a solid surface and the mRNA is contacted with the  
5 probe(s), for example, in an Affymetrix gene chip array. A skilled artisan can readily adapt known mRNA detection methods for use in detecting the level of mRNA encoded by the markers of the present invention.

An alternative method for determining the level of mRNA corresponding to a marker of the present invention in a sample involves the process of nucleic acid  
10 amplification, *e.g.*, by rtPCR (the experimental embodiment set forth in Mullis, 1987, U.S. Patent No. 4,683,202), ligase chain reaction (Barany, 1991, *Proc. Natl. Acad. Sci. USA*, 88:189-193), self sustained sequence replication (Guatelli *et al.*, 1990, *Proc. Natl. Acad. Sci. USA* 87:1874-1878), transcriptional amplification system (Kwoh *et al.*, 1989, *Proc. Natl. Acad. Sci. USA* 86:1173-1177), Q-Beta Replicase (Lizardi *et al.*, 1988,  
15 *Bio/Technology* 6:1197), rolling circle replication (Lizardi *et al.*, U.S. Patent No. 5,854,033) or any other nucleic acid amplification method, followed by the detection of the amplified molecules using techniques well known to those of skill in the art. These detection schemes are especially useful for the detection of nucleic acid molecules if such molecules are present in very low numbers. As used herein, amplification primers  
20 are defined as being a pair of nucleic acid molecules that can anneal to 5' or 3' regions of a gene (plus and minus strands, respectively, or vice-versa) and contain a short region in between. In general, amplification primers are from about 10 to 30 nucleotides in length and flank a region from about 50 to 200 nucleotides in length. Under appropriate conditions and with appropriate reagents, such primers permit the amplification of a  
25 nucleic acid molecule comprising the nucleotide sequence flanked by the primers.

For *in situ* methods, mRNA does not need to be isolated from the prostate cells prior to detection. In such methods, a cell or tissue sample is prepared/processed using known histological methods. The sample is then immobilized on a support, typically a glass slide, and then contacted with a probe that can hybridize to mRNA that encodes  
30 the marker.

As an alternative to making determinations based on the absolute expression level of the marker, determinations may be based on the normalized expression level of the marker. Expression levels are normalized by correcting the absolute expression level of a marker by comparing its expression to the expression of a gene that is not a marker, *e.g.*, a housekeeping gene that is constitutively expressed. Suitable genes for  
5 normalization include housekeeping genes such as the actin gene, or epithelial cell-specific genes. This normalization allows the comparison of the expression level in one sample, *e.g.*, a patient sample, to another sample, *e.g.*, a non-prostate cancer sample, or between samples from different sources.

10 Alternatively, the expression level can be provided as a relative expression level. To determine a relative expression level of a marker, the level of expression of the marker is determined for 10 or more samples of normal versus cancer cell isolates, preferably 50 or more samples, prior to the determination of the expression level for the sample in question. The mean expression level of each of the genes assayed in the larger  
15 number of samples is determined and this is used as a baseline expression level for the marker. The expression level of the marker determined for the test sample (absolute level of expression) is then divided by the mean expression value obtained for that marker. This provides a relative expression level.

Preferably, the samples used in the baseline determination will be from prostate  
20 cancer or from non-prostate cancer cells of prostate tissue. The choice of the cell source is dependent on the use of the relative expression level. Using expression found in normal tissues as a mean expression score aids in validating whether the marker assayed is prostate specific (versus normal cells). In addition, as more data is accumulated, the mean expression value can be revised, providing improved relative expression values  
25 based on accumulated data. Expression data from prostate cells provides a means for grading the severity of the prostate cancer state.

In another embodiment of the present invention, a polypeptide corresponding to a marker is detected. A preferred agent for detecting a polypeptide of the invention is an antibody capable of binding to a polypeptide corresponding to a marker of the invention,  
30 preferably an antibody with a detectable label. Antibodies can be polyclonal, or more preferably, monoclonal. An intact antibody, or a fragment thereof (*e.g.*, Fab or F(ab')<sub>2</sub>) can be used. The term "labeled", with regard to the probe or antibody, is intended to



encompass direct labeling of the probe or antibody by coupling (*i.e.*, physically linking) a detectable substance to the probe or antibody, as well as indirect labeling of the probe or antibody by reactivity with another reagent that is directly labeled. Examples of indirect labeling include detection of a primary antibody using a fluorescently labeled  
5 secondary antibody and end-labeling of a DNA probe with biotin such that it can be detected with fluorescently labeled streptavidin.

Proteins from prostate cells can be isolated using techniques that are well known to those of skill in the art. The protein isolation methods employed can, for example, be such as those described in Harlow and Lane (Harlow and Lane, 1988, *Antibodies: A*  
10 *Laboratory Manual*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York).

A variety of formats can be employed to determine whether a sample contains a protein that binds to a given antibody. Examples of such formats include, but are not limited to, enzyme immunoassay (EIA), radioimmunoassay (RIA), Western blot  
15 analysis, immunohistochemistry and enzyme linked immunoabsorbant assay (ELISA). A skilled artisan can readily adapt known protein/antibody detection methods for use in determining whether prostate cells express a marker of the present invention.

In one format, antibodies, or antibody fragments, can be used in methods such as Western blots, immunohistochemistry or immunofluorescence techniques to detect the  
20 expressed proteins. In such uses, it is generally preferable to immobilize either the antibody, proteins, or cells containing proteins, on a solid support. Well-known supports or carriers include glass, polystyrene, polypropylene, polyethylene, dextran, nylon, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

One skilled in the art will know many other suitable carriers for binding antibody  
25 or antigen, and will be able to adapt such support for use with the present invention. For example, protein isolated from prostate cells can be run on a polyacrylamide gel electrophoresis and immobilized onto a solid phase support such as nitrocellulose. The support can then be washed with suitable buffers followed by treatment with the detectably labeled antibody. The solid phase support can then be washed with the buffer  
30 a second time to remove unbound antibody. The amount of bound label on the solid support can then be detected by conventional means.

The invention also encompasses kits for detecting the presence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample (*e.g.* a prostate sample). Such kits can be used to determine if a subject is suffering from or is at increased risk of developing prostate cancer. For example, the kit can comprise a labeled compound or agent capable of detecting a polypeptide or an mRNA encoding a polypeptide corresponding to a marker of the invention in a biological sample and means for determining the amount of the polypeptide or mRNA in the sample (*e.g.*, an antibody which binds the polypeptide or an oligonucleotide probe which binds to DNA or mRNA encoding the polypeptide). Kits can also include instructions for interpreting the results obtained using the kit.

For antibody-based kits, the kit can comprise, for example: (1) a first antibody (*e.g.*, attached to a solid support) which binds to a polypeptide corresponding to a marker of the invention; and, optionally, (2) a second, different antibody which binds to either the polypeptide or the first antibody and is conjugated to a detectable label.

For oligonucleotide-based kits, the kit can comprise, for example: (1) an oligonucleotide, *e.g.*, a detectably labeled oligonucleotide, which hybridizes to a nucleic acid sequence encoding a polypeptide corresponding to a marker of the invention or (2) a pair of primers useful for amplifying a nucleic acid molecule corresponding to a marker of the invention. The kit can also comprise, *e.g.*, a buffering agent, a preservative, or a protein stabilizing agent. The kit can further comprise components necessary for detecting the detectable label (*e.g.*, an enzyme or a substrate). The kit can also contain a control sample or a series of control samples which can be assayed and compared to the test sample. Each component of the kit can be enclosed within an individual container and all of the various containers can be within a single package, along with instructions for interpreting the results of the assays performed using the kit.

#### B. Pharmacogenomics

Agents or modulators which have a stimulatory or inhibitory effect on expression of a marker of the invention can be administered to individuals to treat (prophylactically or therapeutically) prostate cancer in the patient. In conjunction with such treatment, the pharmacogenomics (*i.e.*, the study of the relationship between an individual's genotype and that individual's response to a foreign compound or drug) of the individual may be

considered. Differences in metabolism of therapeutics can lead to severe toxicity or therapeutic failure by altering the relation between dose and blood concentration of the pharmacologically active drug. Thus, the pharmacogenomics of the individual permits the selection of effective agents (*e.g.*, drugs) for prophylactic or therapeutic treatments  
5 based on a consideration of the individual's genotype. Such pharmacogenomics can further be used to determine appropriate dosages and therapeutic regimens. Accordingly, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual.

10 Pharmacogenomics deals with clinically significant variations in the response to drugs due to altered drug disposition and abnormal action in affected persons. See, *e.g.*, Linder (1997) *Clin. Chem.* 43(2):254-266. In general, two types of pharmacogenetic conditions can be differentiated. Genetic conditions transmitted as a single factor altering the way drugs act on the body are referred to as "altered drug action." Genetic  
15 conditions transmitted as single factors altering the way the body acts on drugs are referred to as "altered drug metabolism". These pharmacogenetic conditions can occur either as rare defects or as polymorphisms. For example, glucose-6-phosphate dehydrogenase (G6PD) deficiency is a common inherited enzymopathy in which the main clinical complication is hemolysis after ingestion of oxidant drugs (anti-malarials,  
20 sulfonamides, analgesics, nitrofurans) and consumption of fava beans.

As an illustrative embodiment, the activity of drug metabolizing enzymes is a major determinant of both the intensity and duration of drug action. The discovery of genetic polymorphisms of drug metabolizing enzymes (*e.g.*, N-acetyltransferase 2 (NAT 2) and cytochrome P450 enzymes CYP2D6 and CYP2C19) has provided an explanation  
25 as to why some patients do not obtain the expected drug effects or show exaggerated drug response and serious toxicity after taking the standard and safe dose of a drug. These polymorphisms are expressed in two phenotypes in the population, the extensive metabolizer (EM) and poor metabolizer (PM). The prevalence of PM is different among different populations. For example, the gene coding for CYP2D6 is highly polymorphic  
30 and several mutations have been identified in PM, which all lead to the absence of functional CYP2D6. Poor metabolizers of CYP2D6 and CYP2C19 quite frequently experience exaggerated drug response and side effects when they receive standard doses.

If a metabolite is the active therapeutic moiety, a PM will show no therapeutic response, as demonstrated for the analgesic effect of codeine mediated by its CYP2D6-formed metabolite morphine. The other extreme are the so called ultra-rapid metabolizers who do not respond to standard doses. Recently, the molecular basis of ultra-rapid  
5 metabolism has been identified to be due to CYP2D6 gene amplification.

Thus, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual. In addition, pharmacogenetic studies can be used to apply genotyping of polymorphic alleles encoding drug-metabolizing enzymes to the  
10 identification of an individual's drug responsiveness phenotype. This knowledge, when applied to dosing or drug selection, can avoid adverse reactions or therapeutic failure and thus enhance therapeutic or prophylactic efficiency when treating a subject with a modulator of expression of a marker of the invention.

This invention also provides a process for preparing a database comprising at  
15 least one of the markers set forth in Tables 1-1 to 6. For example, the polynucleotide sequences are stored in a digital storage medium such that a data processing system for standardized representation of the genes that identify a prostate cancer cell is compiled. The data processing system is useful to analyze gene expression between two cells by first selecting a cell suspected of being of a neoplastic phenotype or genotype and then  
20 isolating polynucleotides from the cell. The isolated polynucleotides are sequenced. The sequences from the sample are compared with the sequence(s) present in the database using homology search techniques. Greater than 90%, more preferably greater than 95% and more preferably, greater than or equal to 97% sequence identity between the test sequence and the polynucleotides of the present invention is a positive indication  
25 that the polynucleotide has been isolated from a prostate cancer cell as defined above.

In an alternative embodiment, the polynucleotides of this invention are sequenced and the information regarding sequence and in some embodiments, relative expression, is stored in any functionally relevant program, *e.g.*, in Compare Report using the SAGE software (available through Dr. Ken Kinzler at John Hopkins University). The  
30 Compare Report provides a tabulation of the polynucleotide sequences and their abundance for the samples normalized to a defined number of polynucleotides per library (say 25,000). This is then imported into MS-ACCESS either directly or via

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copying the data into an Excel spreadsheet first and then from there into MS-ACCESS for additional manipulations. Other programs such as SYBASE or Oracle that permit the comparison of polynucleotide numbers could be used as alternatives to MS-ACCESS. Enhancements to the software can be designed to incorporate these additional  
5 functions. These functions consist in standard Boolean, algebraic, and text search operations, applied in various combinations to reduce a large input set of polynucleotides to a manageable subset of a polynucleotide of specifically defined interest.

One skilled in the art may create groups containing one or more project(s) by  
10 combining the counts of specific polynucleotides within a group (*e.g.*,  $\text{GroupNormal} = \text{Normal1} + \text{Normal2}$ ,  $\text{GroupTumor1} + \text{TumorCellLine}$ ). Additional characteristic values are also calculated for each tag in the group (*e.g.*, average count, minimum count, maximum count). One skilled in the art may calculate individual tag count ratios between groups, for example the ratio of the average GroupNormal count to the average  
15 GroupTumor count for each polynucleotide. A statistical measure of the significance of observed differences in tag counts between groups may be calculated.

### C. Monitoring Clinical Trials

Monitoring the influence of agents (*e.g.*, drug compounds) on the level of  
20 expression of a marker of the invention can be applied not only in basic drug screening, but also in clinical trials. For example, the effectiveness of an agent to affect marker expression can be monitored in clinical trials of subjects receiving treatment for prostate cancer. In a preferred embodiment, the present invention provides a method for monitoring the effectiveness of treatment of a subject with an agent (*e.g.*, an agonist,  
25 antagonist, peptidomimetic, protein, peptide, nucleic acid, small molecule, or other drug candidate) comprising the steps of (i) obtaining a pre-administration sample from a subject prior to administration of the agent; (ii) detecting the level of expression of one or more selected markers of the invention in the pre-administration sample; (iii) obtaining one or more post-administration samples from the subject; (iv) detecting the  
30 level of expression of the marker(s) in the post-administration samples; (v) comparing the level of expression of the marker(s) in the pre-administration sample with the level of expression of the marker(s) in the post-administration sample or samples; and (vi)

altering the administration of the agent to the subject accordingly. For example, increased administration of the agent can be desirable to increase expression of the marker(s) to higher levels than detected, *i.e.*, to increase the effectiveness of the agent. Alternatively, decreased administration of the agent can be desirable to decrease expression of the marker(s) to lower levels than detected, *i.e.*, to decrease the effectiveness of the agent.

#### D. Surrogate Markers

The markers of the invention may serve as surrogate markers for one or more disorders or disease states or for conditions leading up to disease states, and in particular, prostate cancer. As used herein, a "surrogate marker" is an objective biochemical marker which correlates with the absence or presence of a disease or disorder, or with the progression of a disease or disorder (*e.g.*, with the presence or absence of a tumor). The presence or quantity of such markers is independent of the disease. Therefore, these markers may serve to indicate whether a particular course of treatment is effective in lessening a disease state or disorder. Surrogate markers are of particular use when the presence or extent of a disease state or disorder is difficult to assess through standard methodologies (*e.g.*, early stage tumors), or when an assessment of disease progression is desired before a potentially dangerous clinical endpoint is reached (*e.g.*, an assessment of cardiovascular disease may be made using cholesterol levels as a surrogate marker, and an analysis of HIV infection may be made using HIV RNA levels as a surrogate marker, well in advance of the undesirable clinical outcomes of myocardial infarction or fully-developed AIDS). Examples of the use of surrogate markers in the art include: Koomen *et al.* (2000) *J. Mass. Spectrom.* 35: 258-264; and James (1994) *AIDS Treatment News Archive* 209.

The markers of the invention are also useful as pharmacodynamic markers. As used herein, a "pharmacodynamic marker" is an objective biochemical marker which correlates specifically with drug effects. The presence or quantity of a pharmacodynamic marker is not related to the disease state or disorder for which the drug is being administered; therefore, the presence or quantity of the marker is indicative of the presence or activity of the drug in a subject. For example, a pharmacodynamic marker may be indicative of the concentration of the drug in a

biological tissue, in that the marker is either expressed or transcribed or not expressed or transcribed in that tissue in relationship to the level of the drug. In this fashion, the distribution or uptake of the drug may be monitored by the pharmacodynamic marker. Similarly, the presence or quantity of the pharmacodynamic marker may be related to

5 the presence or quantity of the metabolic product of a drug, such that the presence or quantity of the marker is indicative of the relative breakdown rate of the drug *in vivo*. Pharmacodynamic markers are of particular use in increasing the sensitivity of detection of drug effects, particularly when the drug is administered in low doses. Since even a small amount of a drug may be sufficient to activate multiple rounds of marker

10 transcription or expression, the amplified marker may be in a quantity which is more readily detectable than the drug itself. Also, the marker may be more easily detected due to the nature of the marker itself; for example, using the methods described herein, antibodies may be employed in an immune-based detection system for a protein marker, or marker-specific radiolabeled probes may be used to detect a mRNA marker.

15 Furthermore, the use of a pharmacodynamic marker may offer mechanism-based prediction of risk due to drug treatment beyond the range of possible direct observations. Examples of the use of pharmacodynamic markers in the art include: Matsuda *et al.* US 6,033,862; Hattis *et al.* (1991) *Env. Health Perspect.* 90: 229-238; Schentag (1999) *Am. J. Health-Syst. Pharm.* 56 Suppl. 3: S21-S24; and Nicolau (1999) *Am. J. Health-Syst.*

20 *Pharm.* 56 Suppl. 3: S16-S20.

The markers of the invention are also useful as pharmacogenomic markers. As used herein, a "pharmacogenomic marker" is an objective biochemical marker which correlates with a specific clinical drug response or susceptibility in a subject (see, e.g., McLeod *et al.* (1999) *Eur. J. Cancer* 35(12): 1650-1652). The presence or quantity of

25 the pharmacogenomic marker is related to the predicted response of the subject to a specific drug or class of drugs prior to administration of the drug. By assessing the presence or quantity of one or more pharmacogenomic markers in a subject, a drug therapy which is most appropriate for the subject, or which is predicted to have a greater degree of success, may be selected. For example, based on the presence or quantity of

30 RNA or protein for specific tumor markers in a subject, a drug or course of treatment may be selected that is optimized for the treatment of the specific tumor likely to be present in the subject. Similarly, the presence or absence of a specific sequence

mutation in marker DNA may correlate with drug response. The use of pharmacogenomic markers therefore permits the application of the most appropriate treatment for each subject without having to administer the therapy.

5 VII. Electronic Apparatus Readable Media and Arrays

Electronic apparatus readable media comprising a prostate cancer marker of the present invention is also provided. As used herein, "electronic apparatus readable media" refers to any suitable medium for storing, holding or containing data or information that can be read and accessed directly by an electronic apparatus. Such media can include, but are not limited to: magnetic storage media, such as floppy discs, 10 hard disc storage medium, and magnetic tape; optical storage media such as compact disc; electronic storage media such as RAM, ROM, EPROM, EEPROM and the like; general hard disks and hybrids of these categories such as magnetic/optical storage media. The medium is adapted or configured for having recorded thereon a marker of 15 the present invention.

As used herein, the term "electronic apparatus" is intended to include any suitable computing or processing apparatus or other device configured or adapted for storing data or information. Examples of electronic apparatus suitable for use with the present invention include stand-alone computing apparatus; networks, including a local 20 area network (LAN), a wide area network (WAN) Internet, Intranet, and Extranet; electronic appliances such as a personal digital assistants (PDAs), cellular phone, pager and the like; and local and distributed processing systems.

As used herein, "recorded" refers to a process for storing or encoding information on the electronic apparatus readable medium. Those skilled in the art can 25 readily adopt any of the presently known methods for recording information on known media to generate manufactures comprising the markers of the present invention.

A variety of software programs and formats can be used to store the marker information of the present invention on the electronic apparatus readable medium. For example, the nucleic acid sequence corresponding to the markers can be represented in a 30 word processing text file, formatted in commercially-available software such as WordPerfect and MicroSoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like, as well as in other



forms. Any number of dataprocessor structuring formats (e.g., text file or database) may be employed in order to obtain or create a medium having recorded thereon the markers of the present invention.

By providing the markers of the invention in readable form, one can routinely  
5 access the marker sequence information for a variety of purposes. For example, one skilled in the art can use the nucleotide or amino acid sequences of the present invention in readable form to compare a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of the sequences of the invention which match a particular  
10 target sequence or target motif.

The present invention therefore provides a medium for holding instructions for performing a method for determining whether a subject has prostate cancer or a pre-disposition to prostate cancer, wherein the method comprises the steps of determining the presence or absence of a prostate cancer marker and based on the presence or  
15 absence of the prostate cancer marker, determining whether the subject has prostate cancer or a pre-disposition to prostate cancer and/or recommending a particular treatment for the prostate cancer or pre-prostate cancer condition.

The present invention further provides in an electronic system and/or in a network, a method for determining whether a subject has prostate cancer or a pre-disposition to prostate cancer associated with a prostate cancer marker wherein the  
20 method comprises the steps of determining the presence or absence of the prostate cancer marker, and based on the presence or absence of the prostate cancer marker, determining whether the subject has prostate cancer or a pre-disposition to prostate cancer, and/or recommending a particular treatment for the prostate cancer or pre-prostate cancer condition. The method may further comprise the step of receiving  
25 phenotypic information associated with the subject and/or acquiring from a network phenotypic information associated with the subject.

The present invention also provides in a network, a method for determining whether a subject has prostate cancer or a pre-disposition to prostate cancer associated  
30 with a prostate cancer marker, said method comprising the steps of receiving information associated with the prostate cancer marker receiving phenotypic information associated with the subject, acquiring information from the network corresponding to the

prostate cancer marker and/or prostate cancer, and based on one or more of the phenotypic information, the prostate cancer marker, and the acquired information, determining whether the subject has prostate cancer or a pre-disposition to prostate cancer. The method may further comprise the step of recommending a particular treatment for the prostate cancer or pre- prostate cancer condition.

The present invention also provides a business method for determining whether a subject has prostate cancer or a pre-disposition to prostate cancer, said method comprising the steps of receiving information associated with the prostate cancer marker, receiving phenotypic information associated with the subject, acquiring information from the network corresponding to the prostate cancer marker and/or prostate cancer, and based on one or more of the phenotypic information, the prostate cancer marker, and the acquired information, determining whether the subject has prostate cancer or a pre-disposition to prostate cancer. The method may further comprise the step of recommending a particular treatment for the prostate cancer or pre- prostate cancer condition.

The invention also includes an array comprising a prostate cancer marker of the present invention. The array can be used to assay expression of one or more genes in the array. In one embodiment, the array can be used to assay gene expression in a tissue to ascertain tissue specificity of genes in the array. In this manner, up to about 7600 genes can be simultaneously assayed for expression. This allows a profile to be developed showing a battery of genes specifically expressed in one or more tissues.

In addition to such qualitative determination, the invention allows the quantitation of gene expression. Thus, not only tissue specificity, but also the level of expression of a battery of genes in the tissue is ascertainable. Thus, genes can be grouped on the basis of their tissue expression *per se* and level of expression in that tissue. This is useful, for example, in ascertaining the relationship of gene expression between or among tissues. Thus, one tissue can be perturbed and the effect on gene expression in a second tissue can be determined. In this context, the effect of one cell type on another cell type in response to a biological stimulus can be determined. Such a determination is useful, for example, to know the effect of cell-cell interaction at the level of gene expression. If an agent is administered therapeutically to treat one cell type but has an undesirable effect on another cell type, the invention provides an assay

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to determine the molecular basis of the undesirable effect and thus provides the opportunity to co-administer a counteracting agent or otherwise treat the undesired effect. Similarly, even within a single cell type, undesirable biological effects can be determined at the molecular level. Thus, the effects of an agent on expression of other  
5 than the target gene can be ascertained and counteracted.

In another embodiment, the array can be used to monitor the time course of expression of one or more genes in the array. This can occur in various biological contexts, as disclosed herein, for example development of prostate cancer, progression of prostate cancer, and processes, such a cellular transformation associated with prostate  
10 cancer.

The array is also useful for ascertaining the effect of the expression of a gene on the expression of other genes in the same cell or in different cells. This provides, for example, for a selection of alternate molecular targets for therapeutic intervention if the ultimate or downstream target cannot be regulated.

15 The array is also useful for ascertaining differential expression patterns of one or more genes in normal and abnormal cells. This provides a battery of genes that could serve as a molecular target for diagnosis or therapeutic intervention.

## VIII. Experimental Protocol

### 20 A. Subtracted Libraries and Transcript Profiling

Subtracted libraries are generated using a PCR based method that allows the isolation of clones expressed at higher levels in one population of mRNA (tester) compared to another population (driver). Both tester and driver mRNA populations are converted into cDNA by reverse transcription, and then PCR amplified using the  
25 SMART PCR kit from Clontech. Tester and driver cDNAs are then hybridized using the PCR-Select cDNA subtraction kit from Clontech. This technique results in both subtraction and normalization, which is an equalization of copy number of low-abundance and high-abundance sequences. After generation of the subtractive libraries, a group of 96 or more clones from each library is tested to confirm differential  
30 expression by reverse Southern hybridization.

SEQ ID NOS: 1-7511 (of Table 3-1) were identified through the above-described subtractive library hybridization techniques. In Table 3-1, SEQ ID NOS: 1-1240 were from Library cMhqaa; SEQ ID NOS: 1241-2805 were from Library cMhqab; SEQ ID NOS: 2806-4723 were from Library cMhqac; SEQ ID NOS: 4724-5247 were from  
5 Library cMhqag; SEQ ID NOS: 5248-6897 were from Library cMhqad; and, SEQ ID NOS: 6898-7511 were from Library cMhqaf. The "tester" source for two of these subtracted libraries, cMhqaa and cMhqab, was comprised of cDNA generated from stage T3NO tumors. The "driver" source for the library-designated cMhqaa was cDNA prepared from benign prostate hyperplasia and activated lymphocytes [B cells, T cells  
10 (CD4 and CD8)]. The driver cDNA for the cMhqab library was prepared from benign prostate hyperplasia cDNA. The "tester" source for the cMhqac and cMhqag subtracted libraries was stage T2 and T3 cDNA derived from prostate cancer patients with poor clinical outcome, whose cancer had recurred following surgery. The "driver" source for these subtracted libraries (cMhqac and cMhqag) was activated lymphocytes and stage  
15 T2 tumor cDNA that was obtained from patients who had a good clinical outcome and their disease had not recurred after surgery. The cMhqad-subtracted library was prepared using stage T2 tumor cDNA from patients that had a good clinical outcome as tester. The driver source for this library (cMhqad) was obtained from activated lymphocytes and stage T2 and T3 tumor samples recovered from patients whose cancer  
20 had recurred following surgery. The tester for the cMhqaf library was cDNA obtained from the prostate cancer cell lines, DU145, LNCaP and PC3. The "driver" source for the cMhqaf-subtracted library was comprised of cDNA generated from a normal prostate cell strain, PrEC.

SEQ ID NOS: 7512-10054 (Table 3-3) were identified through the above-  
25 identified subtractive library hybridization techniques. These sequences were from Library cMhqae. The "tester" source for Library cMhqae was comprised of cDNA generated from metastatic prostate cancer cell lines (Du145, PC3 and LNCaP). The "driver" source was comprised of cDNA generated from a normal prostate cell strain, PrEC. Table 3-4 includes sequences for the markers of Tables 3-3 which are found in  
30 non-public databases (*e.g.*, PREPATNUC).

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SEQ ID NOS: 10055-15911 (Table 3-5) were identified through the above-identified subtractive library hybridization techniques. SEQ ID NOS: 10055-11680 were from Library cMhqah; SEQ ID NOS: 11681-13328 were from Library cMhqai; and SEQ ID NOS: 13329-15911 were from Library cMhqak. This "tester" DNA was  
 5 synthesized from membrane-associated polysomes mRNA separated from other mRNA's (*i.e.*, cytosolic, nuclear, etc.) by density sedimentation equilibrium. The "driver" source was cDNA prepared from the non-membrane bound fraction (free cytosolic polysomes) obtained from the same density sedimentation equilibrium experiment. This mRNA was shown to be depleted of both secreted and membrane  
 10 bound protein by profiling on the same 20K array. Table 3-6 includes sequences for the markers of Table 3-5 which are found in non-public databases (*e.g.*, PREPATNUC).

SEQ ID NOS: 1-7653 (of Table 4-1) were identified through the above-described subtractive library hybridization techniques. In Table 4-1, the listed markers can be found in the following databases:

15	Sequences 1-1264	dbEST
	Sequences 1265-1912	GenBank
	Sequences 1949-1964	PREPATNUC
	Sequences 1965-1970	dbEST
	Sequences 1971-1973	GenBank
20	Sequences 1974-1981	dbEST
	Sequences 1982-2011	GenBank
	Sequences 2012-3148	dbEST
	Sequences 3149-3687	GenBank
	Sequences 3688-3722	NUCPATENT
25	Sequences 3723-3733	PREPATNUC
	Sequences 3734-3884	GenBank
	Sequences 3885-4128	dbEST
	Sequences 4129-4143	NUCPATENT
	Sequences 4144-4152	PREPATNUC
30	Sequences 4153-4174	GenBank
	Sequences 4175-4176	dbEST
	Sequences 4177-4180	GenBank

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	Sequences 4181-5009	dbEST
	Sequences 5010-5585	GenBank
	Sequences 5586-5613	NUCPATENT
	Sequence 5614	PREPATNUC
5	Sequences 5615-5717	GenBank
	Sequences 5718-5858	dbEST
	Sequences 5859-5864	NUCPATENT
	Sequence 5865	PREPATNUC
	Sequences 5866-5881	GenBank
10	Sequences 5882-7064	dbEST
	Sequences 7065-7573	GenBank
	Sequences 7574-7621	NUCPATENT
	Sequences 7622-7632	PREPATNUC
	Sequences 7633-7653	GenBank.

15

For transcript profiling, nylon arrays are prepared by spotting purified PCR product onto a nylon membrane using a robotic gridding system linked to a sample database. Several thousand clones are spotted on each nylon filter. RNA or DNA from clinical samples (tumor and normal), and cell lines as well as from subtracted libraries, are used for hybridization against the nylon arrays. The RNA or DNA is labeled utilizing an *in vitro* reverse transcription reaction that contains a radiolabeled nucleotide that is incorporated during the reaction. Alternatively, mRNA is converted into cDNA by reverse transcription, and then PCR amplified using the SMART PCR kit from Clontech. Hybridization experiments are carried out by combining labeled RNA or DNA samples with nylon filters in a hybridization chamber. Duplicate, independent hybridization experiments are performed to generate transcriptional profiling data. See, *Nature Genetics*, 21 (1999). Amplified cDNA is then radiolabelled using random priming with PRIME IT from Stratagene.

30

#### B. Proteomics

Proteins that are secreted by normal and transformed cells in culture are analyzed to identify those proteins that are likely to be secreted by cancerous cells into body

fluids. Supernatants are isolated and MWT-CO filters are used to simplify the mixture of proteins. The proteins are then digested with trypsin. The tryptic peptides are loaded onto a microcapillary HPLC column where they are separated, and eluted directly into an ion trap mass spectrometer, through a custom-made electrospray ionization source.

- 5 Throughout the gradient, sequence data is acquired through fragmentation of the four most intense ions (peptides) that elute off the column, while dynamically excluding those that have already been fragmented. In this way, approximately 2000 scans worth of sequence data are obtained, corresponding to approximately 50 to 200 different proteins in the sample. These data are searched against databases using correlation  
10 analysis tools, such as MS-Tag, to identify the proteins in the supernatants.

Protein profiling experiments were also undertaken to assess whether the proteins associated with the expression of individual markers of the invention are secreted. Transcriptional profiling experiments were performed on fractions of RNA that were obtained from either (a) endoplasmic reticulum-associated (ER-associated)  
15 ribosomes, or (b) free ribosomes. Eukaryotic RNA which is isolated from ER-associated ribosomes tends to encode secreted and membrane bound proteins rather than intracellular proteins. Accordingly, markers of the invention which exhibit significantly enhanced expression in fractions of RNA from ER-associated ribosomes (in comparison with RNA from free ribosomes) are predicted to be associated with secreted proteins.

20

### C. Androgen Sensitivity Markers

A murine model was employed to generate prostate tumors from xenografts of human prostate tumor tissue (CWR22 model; see, e.g., Nagabhushan *et al*, (1996) *Cancer Res.* 56:3042-3046; Pretlow *et al*, (1993) *J. Natl. Cancer Inst.* 85:394-  
25 398). When the mice which carry such xenografts are castrated, the tumors generally regress due to androgen dependence. Some androgen-independent tumors will recur 3-10 months later (CWR22R tumors).

Transcriptional profiling was able to identify markers with significantly (ten-fold or greater) elevated expression in androgen-independent tumors (CWR22R) over  
30 androgen-dependent tumors (CWR22) under conditions of androgen presence (e.g. non-castrated animals) or androgen deprivation (e.g., 7 and 14 days post castration).

Androgen-independent tumors are generally considered more clinically aggressive than androgen-dependant tumors.

#### VIII. Summary Of The Data Provided In The Tables

5           The description for the fields of Tables 1-1 to 1-5 is listed below:

          "Genbank Acc No." corresponds to the GenBank accession number assigned the particular sequence (see, for example <http://www.ncbi.nlm.nih.gov/Entrez/nucleotide.html>). All referenced GenBank sequences are expressly incorporated herein by reference.

10           "Clone" corresponds to the cDNA clone number from the IMAGE Consortium (see, for example Lennon, G., *et al.*, 1996, *Genomics* 33:151-152; and <http://www-bio.llnl.gov/bbrp/image/image.html>). All referenced IMAGE clone sequences are expressly incorporated herein by reference.

          "Aver. of Tumors" corresponds to the average intensity of all the 5 stage T2NO  
15 tumors(MPM000115-119).

          "Aver. of BPH" corresponds to the average intensity of the four BPH samples.

          "MPM-115/aver BPH" corresponds to the fold over-expression of the tumor MPM000115 compared to the average BPH intensity.

          "MPM-116/aver BPH" corresponds to the fold over-expression of the tumor  
20 MPM000116 compared to the average BPH intensity.

          "MPM-117/aver BPH" corresponds to the fold over-expression of the tumor MPM000117 compared to the average BPH intensity.

          "MPM-118/aver BPH" corresponds to the fold over-expression of the tumor MPM000118 compared to the average BPH intensity.

25           "MPM-119/aver BPH" corresponds to the fold over-expression of the tumor MPM000119 compared to the average BPH intensity.

          "Tumor Aver./aver BPH" corresponds to the fold difference of the Aver. Of Tumors compared to the aver BPH.

          "Aver of Normals" corresponds to the average intensity of the four Normal (non-  
30 tumor) tissue samples.

          "MPM-115/aver Normal" corresponds to the fold over-expression of the tumor MPM000115 compared to the average Normal intensity.



"MPM-116/aver Normal" corresponds to the fold over-expression of the tumor MPM000116 compared to the average Normal intensity.

"MPM-117/aver Normal" corresponds to the fold over-expression of the tumor MPM000117 compared to the average Normal intensity.

5 "MPM-118/aver Normal" corresponds to the fold over-expression of the tumor MPM000118 compared to the average Normal intensity.

"MPM-119/aver Normal" corresponds to the fold over-expression of the tumor MPM000119 compared to the average Normal intensity.

10 "Avg Fold" corresponds to the fold difference of Aver of Tumors compared to aver of Normals.

"Tumor/Normal" corresponds to the fold change in average of Tumors compared to average of Normals.

"Tumor/BPH" corresponds to the fold change in average of Tumors compared to average of BPH.

15 "T/N 5X,> 1/5" indicates whether the sequence is expressed 5 fold or greater in at least 1 tumor compared to its expression in normal prostate.

"T/N 3X,> 2/5" indicates whether the sequence is expressed 3 fold or greater in at least 2 tumors compared to its expression in normal prostate.

20 "T/BPH 5X,> 1/5" indicates whether the sequence is expressed 5 fold or greater in at least 1 tumor compared to its expression in BPH.

"T/BPH 3X,> 2/5" indicates whether the sequence is expressed 3 fold or greater in at least 2 tumors compared to its expression in BPH.

"T/N 10X,> 1/5" indicates whether the sequence is expressed 10 fold or greater in at least 1 tumor compared to its expression in normal prostate.

25 "T/N 5X,> 3/5" indicates whether the sequence is expressed 5 fold or greater in at least 3 tumors compared to its expression in normal prostate.

"T/N 3X,> 5/5" indicates whether the sequence is expressed 3 fold or greater in all 5 tumors compared to its expression in normal prostate.

30 "T/BPH 10X,> 1/5" indicates whether the sequence is expressed 10 fold or greater in at least 1 tumor compared to its expression in BPH.

"T/BPH 5X,> 3/5" indicates whether the sequence is expressed 5 fold or greater in at least 3 tumors compared to its expression in BPH.

"T/BPH 3X, $> 5/5$ " indicates whether the sequence is expressed 3 fold or greater in all 5 tumors compared to its expression in BPH.

"T/N & T/BPH" indicates whether the sequence is over-expressed in Tumors compared to both Normal and BPH tissues.

5 "Secreted" indicates whether the sequence is secreted or predicted to be secreted based on membrane-bound polysome experiments described herein.

"Prostate Spec Exp" indicates whether this sequence has prostate-specific expression based on the occurrence of this sequence in databases.

Listed below are the definitions of the abbreviations used in Tables 2-1 to 2-12:

10 "Ave. BPH" indicates the mean expression in four non-cancerous benign prostate hyperplasia (BPH) tissues designated MPM000180, MPM000181, MPM000182 and MP000183.

"Ave. Tumor" refers to the mean expression of six stage T3NO tumors designated MPM000120, MPM000121, MPM000122, MPM000123, MPM000124,  
15 MPM000125.

"Ave. Fold" refers to the fold increase in expression in tumor tissues relative that of BPH tissues (calculated as Ave. Tumor/Ave. BPH).

"Fold (MPM120/Ave. BPH)" refers to the fold increase in expression in prostate tumor MPM000120 over that observed in BPH tissue (calculated as expression score in  
20 MPM000120/Ave. BPH).

"Fold (MPM121/Ave. BPH)" refers to the fold increase in expression in prostate tumor MPM000121 over that observed in BPH tissue (calculated as expression score in MPM000121/Ave. BPH).

"Fold (MPM122/Ave. BPH)" refers to the fold increase in expression in prostate  
25 tumor MPM000122 over that observed in BPH tissue (calculated as expression score in MPM000122/Ave. BPH).

"Fold (MPM123/Ave. BPH)" refers to the fold increase in expression in prostate tumor MPM000123 over that observed in BPH tissue (calculated as expression score in MPM000123/Ave. BPH).

30 "Fold (MPM124/Ave. BPH)" refers to the fold increase in expression in prostate tumor MPM000124 over that observed in BPH tissue (calculated as expression score in MPM000124/Ave. BPH).

“Fold (MPM125/Ave. BPH)” refers to the fold increase in expression in prostate tumor MPM000125 over that observed in BPH tissue (calculated as expression score in MPM000125/Ave. BPH).

“Ave. Good” indicates the mean expression of five cancerous prostate tumors  
5 from five patients that were disease free for at least five years or more following surgery. These were all stage T2NO tumors designated as MPM000027, MPM000028, MPM000029, MPM000030 and MPM000035.

“Ave. Poor” refers to the mean expression of four prostate tumor tissues from four patients whose disease recurred following surgery within a period of less than 5  
10 years. These were two stage T2NO and 2 stage T3NO tumors. These were designated as MPM000031, MPM000032, MPM000033 and MPM000034.

“Fold (Ave.Poor/Ave.Good)” refers to the fold increase in mean expression of tumor tissues from patients with poor clinical outcome relative to the mean expression of tumor tissues from patients with good clinical outcome.

15 “Fold (MPM000031/Ave. Good)” refers to the fold increase in expression in prostate tumor MPM000031 over that observed as the mean of the five tumor samples from patients with a good clinical outcome (calculated as expression score in MPM000031/Ave.Good).

“Fold (MPM000032/Ave. Good)” refers to the fold increase in expression in  
20 prostate tumor MPM000032 over that observed as the mean of the five tumor samples from patients with a good clinical outcome (calculated as expression score in MPM000032/Ave.Good).

“Fold (MPM000033/Ave. Good)” refers to the fold increase in expression in prostate tumor MPM000033 over that observed as the mean of the five tumor samples  
25 from patients with a good clinical outcome (calculated as expression score in MPM000033/Ave.Good).

“Fold (MPM000034/Ave. Good)” refers to the fold increase in expression in prostate tumor MPM000034 over that observed as the mean of the five tumor samples from patients with a good clinical outcome (calculated as expression score in  
30 MPM000034/Ave.Good).

"Fold (Ave.Good/Ave.Poor)" refers to the fold increase in mean expression of tumor tissues from patients with good clinical outcome relative to the mean expression of tumor tissues from patients with poor clinical outcome.

5 "Fold (MPM000027/Ave. Poor)" refers to the fold increase in expression in prostate tumor MPM000027 over that observed as the mean of the four tumor samples from patients with a poor clinical outcome (calculated as expression score in MPM000027/Ave.Poor).

10 "Fold (MPM000028/Ave. Poor)" refers to the fold increase in expression in prostate tumor MPM000028 over that observed as the mean of the four tumor samples from patients with a poor clinical outcome (calculated as expression score in MPM000028/Ave.Poor).

15 "Fold (MPM000029/Ave. Poor)" refers to the fold increase in expression in prostate tumor MPM000029 over that observed as the mean of the four tumor samples from patients with a poor clinical outcome (calculated as expression score in MPM000029/Ave.Poor).

"Fold (MPM000030/Ave. Poor)" refers to the fold increase in expression in prostate tumor MPM000030 over that observed as the mean of the four tumor samples from patients with a poor clinical outcome (calculated as expression score in MPM000030/Ave.Poor).

20 "Fold (MPM000035/Ave. Poor)" refers to the fold increase in expression in prostate tumor MPM000035 over that observed as the mean of the four tumor samples from patients with a poor clinical outcome (calculated as expression score in MPM000035/Ave.Poor).

25 "Ave. Cancer Cell Line Values" refers to the mean expression of three prostate cancer cell lines, designated MPM000002 (LNCaP), MPM000271 (PC3) and MPM000272 (DU145).

MPM1 refers to the normal prostate epithelial cell strain (PrEC), designated MPM000001.

30 "Fold (Ave.Cell line/MPM1)" refers to the fold increase in mean expression of the three prostate cancer cell line relative to the expression in the normal prostate cell strain MPM000001 (PrEC).

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“Fold (MPM0000002/MPM000001)” refers to the fold increase in expression in prostate cancer cell line MPM0000002 (LNCaP) over that observed in MPM000001 (PrEC) the normal cell strain (calculated as expression score in MPM0000002/MPM000001).

5 “Fold (MPM0000271/MPM000001)” refers to the fold increase in expression in prostate cancer cell line MPM0000271 (PC3) over that observed in MPM000001 (PrEC) the normal cell strain (calculated as expression score in MPM0000271/MPM000001).

“Fold (MPM0000272/MPM000001)” refers to the fold increase in expression in prostate cancer cell line MPM0000272 (DU145) over that observed in MPM000001 (PrEC) the normal cell strain (calculated as expression score in MPM0000272/MPM000001).

The description of the fields for Tables 3-1, 3-3, 3-5, 4-1 and 6 is listed below:

“Sequence #” or “Sequence ID” corresponds to the SEQ ID NO. assigned for  
15 each nucleotide sequence listed.

“Accession #” or “Accession” or “Acc No” corresponds to the accession number assigned to the nucleotide sequence in the relevant database.

“Database” or “Database hit” refers to the relevant database where the nucleotide sequence may be found according to its accession number. Those databases which are  
20 public include GenBank, dbEST (a division of GenBank), and NUCPATENT (a GENESEQ database, available through Derwent). For examples, see <http://www.ncbi.nlm.nih.gov/Entrez/nucleotide.html> for GenBank and [www.derwent.com](http://www.derwent.com) for GENESEQ. “GI number” is the GI identification number assigned to the marker in the GenBank database (see *supra*). Nucleic acid sequences of  
25 markers from Tables 3-1 and 4-1 which are from non-public databases (*e.g.*, PREPATNUC) are given in Tables 3-2 and 4-2, respectively. All referenced database sequences are expressly incorporated herein by reference.

The description of the fields for Tables 5-1 and 5-2 is listed below:

“Order” and “Clone” correspond to assigned reference numbers for each  
30 nucleotide sequence listed.

“GenBank Accession Number” corresponds to the accession number assigned to the nucleotide sequence in the GenBank database.

Other Embodiments

Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention  
5 described herein. Such equivalents are intended to be encompassed by the following claims.

All publications including journal references, patents and databases are expressly incorporated by reference.

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Claims

What is claimed is:

- 5           1.       A method of assessing whether a patient is afflicted with prostate cancer, the method comprising comparing:
  - a)       the level of expression of a marker in a patient sample, wherein the marker is selected from the group consisting of the markers listed in Tables 1-1 to 6, and
  - b)       the normal level of expression of the marker in a control non-prostate
- 10   cancer sample,  
          wherein a significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with prostate cancer
2.       The method of claim 1, wherein the marker corresponds to a secreted
- 15   protein.
3.       The method of claim 1, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.
4.       The method of claim 1, wherein the sample comprises cells obtained from the patient.
- 20       5.       The method of claim 4, wherein the sample is a prostate tissue sample.
6.       The method of claim 4, wherein the cells are in a fluid selected from the group consisting of blood fluids, semen, prostate fluid, lymph and urine.
7.       The method of claim 1, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a protein or protein
- 25   fragment corresponding to the marker.

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8. The method of claim 7, wherein the presence of the protein or protein fragment is detected using a reagent which specifically binds with the protein or protein fragment.

9. The method of claim 8, wherein the reagent is selected from the group  
5 consisting of an antibody, an antibody derivative, and an antibody fragment.

10. The method of claim 1, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide or portion thereof, wherein the transcribed polynucleotide comprises the marker.

10 11. The method of claim 10, wherein the transcribed polynucleotide is an mRNA.

12. The method of claim 10, wherein the transcribed polynucleotide is a cDNA.

13. The method of claim 10, wherein the step of detecting further comprises  
15 amplifying the transcribed polynucleotide.

14. The method of claim 1, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide which anneals with the marker or anneals with a portion of a polynucleotide wherein the polynucleotide comprises the marker, under stringent  
20 hybridization conditions.

15. The method of claim 1, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a patient not afflicted with prostate cancer by a factor of at least about 2.



16. The method of claim 1, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a patient not afflicted with prostate cancer by a factor of at least about 5.

17. The method of claim 1, comprising comparing:

5 a) the level of expression in the sample of each of a plurality of markers independently selected from the markers listed in Tables 1-1 to 6, and

b) the normal level of expression of each of the plurality of markers in samples of the same type obtained from control humans not afflicted with prostate cancer,

10 wherein the level of expression of more than one of the markers is significantly altered, relative to the corresponding normal levels of expression of the markers, is an indication that the patient is afflicted with prostate cancer.

18. The method of claim 17, wherein the level of expression of each of the markers is significantly altered, relative to the corresponding normal levels of expression  
15 of the markers, is an indication that the patient is afflicted with prostate cancer.

19. The method of claim 17, wherein the plurality comprises at least three of the markers.

20. The method of claim 17, wherein the plurality comprises at least five of the markers.

20 21. A method for monitoring the progression of prostate cancer in a patient, the method comprising:

a) detecting in a patient sample at a first point in time, the expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-1 to 6;

25 b) repeating step a) at a subsequent point in time; and

c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of prostate cancer.

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22. The method of claim 21, wherein the marker corresponds to a secreted protein.
23. The method of claim 21, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.
- 5 24. The method of claim 21, wherein the sample comprises cells obtained from the patient.
25. The method of claim 24, wherein the patient sample is a prostate tissue sample.
26. The method of claim 21, wherein between the first point in time and the  
10 subsequent point in time, the patient has undergone surgery to remove prostate tissue.
27. A method of assessing the efficacy of a test compound for inhibiting prostate cancer in a patient, the method comprising comparing:
- a) expression of a marker in a first sample obtained from the patient and exposed to the test compound, wherein the marker is selected from the group consisting  
15 of the markers listed in Tables 1-1 to 6, and
- b) expression of the marker in a second sample obtained from the patient, wherein the sample is not exposed to the test compound,  
wherein a significantly lower level of expression of the marker in the first sample, relative to the second sample, is an indication that the test compound is  
20 efficacious for inhibiting prostate cancer in the patient.
28. The method of claim 27, wherein the first and second samples are portions of a single sample obtained from the patient.
29. The method of claim 27, wherein the first and second samples are portions of pooled samples obtained from the patient.

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30. A method of assessing the efficacy of a therapy for inhibiting prostate cancer in a patient, the method comprising comparing:

a) expression of a marker in the first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein the marker is  
5 selected from the group consisting of the markers listed in Tables 1-1 to 6, and

b) expression of the marker in a second sample obtained from the patient following provision of the portion of the therapy,

wherein a significantly lower level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for  
10 inhibiting prostate cancer in the patient.

31. A method of selecting a composition for inhibiting prostate cancer in a patient, the method comprising:

a) obtaining a sample comprising cancer cells from the patient;

b) separately exposing aliquots of the sample in the presence of a plurality  
15 of test compositions;

c) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-1 to 6; and

d) selecting one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test  
20 compositions.

32. A method of inhibiting prostate cancer in a patient, the method comprising:

a) obtaining a sample comprising cancer cells from the patient;

b) separately maintaining aliquots of the sample in the presence of a  
25 plurality of test compositions;

c) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-1 to 6; and

d) administering to the patient at least one of the test compositions which alters the level of expression of the marker in the aliquot containing that test  
30 composition, relative to other test compositions.

33. A kit for assessing whether a patient is afflicted with prostate cancer, the kit comprising a marker selected from the group consisting of the markers listed in Tables 1-1 to 6.

34. A kit for assessing the presence of prostate cancer cells, the kit  
5 comprising a nucleic acid probe wherein the probe specifically binds with a transcribed polynucleotide corresponding to a marker selected from the group consisting of the markers listed in Tables 1-1 to 6.

35. A kit for assessing the suitability of each of a plurality of compounds for inhibiting prostate cancer in a patient, the kit comprising:  
10 a) the plurality of compounds; and  
b) a reagent for assessing expression of a marker selected from the group consisting of the markers listed in Tables 1-1 to 6.

36. A method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with prostate cancer, the method  
15 comprising:  
isolating a protein or protein fragment corresponding to a marker selected from the group consisting of the markers listed in Tables 1-1 to 6;  
immunizing a mammal using the isolated protein or protein fragment;  
isolating splenocytes from the immunized mammal;  
20 fusing the isolated splenocytes with an immortalized cell line to form hybridomas; and  
screening individual hybridomas for production of an antibody which specifically binds with the protein or protein fragment to isolate the hybridoma.

37. An antibody produced by a hybridoma made by the method of claim 36.

38. A kit for assessing the presence of human prostate cancer cells, the kit  
25 comprising an antibody, wherein the antibody specifically binds with a protein or protein

fragment corresponding to a marker selected from the group consisting of the markers listed in Tables 1-1 to 6.

39. A method of assessing the prostate cell carcinogenic potential of a test compound, the method comprising:

- 5           a)       maintaining separate aliquots of prostate cells in the presence and absence of the test compound; and
- b)       comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-1 to 6, wherein a significantly altered level of expression of the marker in the aliquot
- 10       maintained in the presence of the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses human prostate cell carcinogenic potential.

40. A kit for assessing the prostate cell carcinogenic potential of a test compound, the kit comprising prostate cells and a reagent for assessing expression of a

15       marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-1 to 6.

41. A method of inhibiting prostate cancer in a patient at risk for developing prostate cancer, the method comprising inhibiting expression of a gene corresponding to a marker selected from the markers listed in Tables 1-1 to 6, wherein the gene is

20       overexpressed in prostate cancer.

42. The method of claim 41, further comprising the step of providing to cells of the patient an antisense oligonucleotide complementary to a polynucleotide corresponding to a marker selected from the markers listed in Tables 1-1 to 6.

43. A method of inhibiting prostate cancer in a patient at risk for developing

25       prostate cancer, the method comprising increasing expression of a gene corresponding to a marker selected from the markers listed in Tables 1-1 to 6, wherein the gene is underexpressed in prostate cancer or expressed in normal prostate tissue.

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44. A method for determining whether prostate cancer has metastasized in a patient, the method comprising comparing:

- a) the level of expression of a marker in a patient sample, wherein the marker is selected from the group consisting of the markers listed in Tables 1-1 to 6, and
- 5 b) the normal level or non-metastatic level of expression of the marker in a control sample

wherein a significant difference between the level of expression in the patient sample and the normal level or non-metastatic level is an indication that the prostate cancer has metastasized.

10 45. The method of claim 44, wherein the marker corresponds to a secreted protein.

46. The method of claim 44, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

15 47. The method of claim 44, wherein the sample comprises cells obtained from the patient.

48. The method of claim 47, wherein the patient sample is a prostate tissue sample.

49. A method for assessing the aggressiveness or indolence of prostate cancer comprising comparing:

- 20 a) the level of expression of a marker in a sample, wherein at least one marker is selected from the markers of Tables 1-1 to 6, and
- b) the normal level of expression of the marker in a control sample, wherein a significant difference between the level of expression in the sample and the normal level is an indication that the cancer is aggressive or indolent.

25 50. The method of claim 49, wherein the marker corresponds to a secreted protein.

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51. The method of claim 49, wherein marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

52. The method of claim 49, wherein the sample comprises cells obtained from the patient.

5 53. The method of claim 52, wherein the patient sample is a prostate tissue sample.

54. A system for identifying selected polynucleotide records that identify a prostate cancer cell, the system comprising:

a digital computer;

10 a database coupled to the computer;

a database coupled to the database server having data stored therein, the data comprising records of data comprising a polynucleotide corresponding to a marker from the markers in Tables 1-1 to 6; and

15 a code mechanism for applying queries based upon a desired selection criteria to the data file in the database to produce reports of polynucleotide records which match the desired selection criteria.

55. A method for detecting a prostate cancer cell, using a computer having a processor, memory, display, and input/output devices, the method comprising the steps of:

20 a) providing a sequence of a polynucleotide isolated from a sample suspected of containing a prostate cancer cell;

b) providing a database comprising records of data comprising a polynucleotide corresponding to a marker from the markers in Tables 1-1 to 6; and

25 c) using a code mechanism for applying queries based upon a desired selection criteria to the data file in the database to produce reports of polynucleotide records of step a) which provide a match of the desired selection criteria of the sequences in the database of step b), the presence of a match being a positive indication

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that the polynucleotide of step 1) has been isolated from a cell that is a prostate cancer cell.



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AC6805	490047
AC6846	490055
AC6919	490059
AC6925	490060
A16794	512417
A17362	512432
A17546	490012
A18585	512456
A18657	512461
A21185	579591
A23013	825583
AA001116	1437185
AA001199	1437284
AA001219	1437294
AA001222	1437297
AA001234	1437357
AA001299	1437383
AA001316	1437400
AA001319	1437403
AA001376	1436881
AA001403	1436888
AA001414	1436899
AA001431	1437116
AA001434	1437119
AA001444	1436975
AA001449	1436914
AA001460	1436925
AA001536	1437001
AA001614	1445191
AA001673	1445230
AA001699	1445335
AA001734	1445600
AA001745	1445539
AA001792	1445606
AA001794	1445608
AA001805	1445619
AA001834	1445648
AA001841	1445655
AA001870	1445514
AA001876	1445520
AA001976	1445411
AA001999	1445492
AA002007	1445500
AA002131	1445147
AA002140	1445326
AA002166	1445081
AA002181	1445096
AA002190	1445115
AA002222	1445157
AA004206	1448401
AA004255	1448510
AA004412	1448057
AA004609	1448476
AA004626	1448473
AA004642	1448179
AA004671	1448208
AA004681	1448218

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA004794	1448291
AA004802	1448299
AA004824	1448331
AA004835	1448312
AA004869	1447686
AA004944	1447731
AA004946	1447733
AA004973	1448833
AA005035	1447753
AA005153	1447808
AA005196	1448658
AA005228	1448690
AA005254	1448756
AA005350	1447832
AA005358	1448391
AA005386	1447848
AA005401	1447863
AA005403	1447865
AA007276	1463310
AA007280	1463314
AA007370	1463374
AA007389	1463627
AA007474	1463440
AA007509	1463545
AA007516	1463492
AA007529	1463505
AA007619	1463605
AA007687	1463679
AA009527	1470814
AA009531	1470818
AA009609	1470750
AA009611	1470820
AA009615	1470824
AA009641	1470856
AA009763	1470566
AA009803	1470587
AA009818	1470798
AA009840	1470887
AA009849	1470896
AA009878	1470905
AA010019	1471263
AA010065	1471093
AA010083	1471131
AA010091	1471275
AA010128	1471156
AA010129	1471157
AA010136	1471164
AA010167	1471343
AA010174	1471350
AA010221	1471248
AA010223	1471250
AA010224	1471251
AA010233	1471260
AA010236	1471282
AA010284	1471310
AA010328	1471374
AA010383	1471419

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA010388	1471424
AA010480	1471526
AA010607	1471633
AA010608	1471634
AA010619	1471645
AA010682	1471709
AA010689	1471716
AA010758	1471735
AA010828	1471854
AA010869	1471915
AA010872	1471918
AA010932	1471959
AA010981	1472008
AA010986	1472013
AA011000	1472027
AA011070	1472098
AA011095	1472123
AA011096	1472124
AA011176	1472203
AA011182	1472209
AA011185	1472212
AA011203	1472315
AA011215	1472327
AA011297	1472344
AA011320	1472367
AA011389	1472415
AA011390	1472416
AA011445	1472542
AA011570	1472596
AA011593	1472700
AA011597	1472704
AA011621	1472638
AA011656	1472712
AA011685	1472731
AA011707	1472759
AA012866	1473904
AA012867	1473905
AA012927	1473954
AA013018	1474045
AA013090	1474126
AA013094	1474130
AA013099	1474135
AA013245	1474272
AA013260	1474307
AA013353	1474459
AA013355	1474461
AA015605	1476653
AA015658	1476688
AA015793	1476960
AA015819	1476849
AA015959	1477025
AA016116	1477147
AA016205	1477262
AA016225	1477272
AA016274	1477367
AA016281	1477374
AA016980	1479354

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA017096	1479260
AA017133	1479435
AA017141	1479306
AA017175	1479340
AA017189	1479372
AA017200	1479580
AA017213	1479376
AA017262	1479443
AA017292	1479453
AA017379	1479590
AA017383	1479547
AA017468	1479633
AA017469	1479634
AA017474	1479639
AA017500	1479671
AA017512	1479729
AA017544	1479697
AA017614	1479804
AA017706	1479895
AA018050	1481435
AA018102	1481357
AA018202	1481521
AA018215	1481471
AA018249	1481505
AA018338	1481805
AA018345	1481664
AA018347	1481666
AA018449	1481704
AA018460	1481715
AA018591	1481846
AA018675	1481940
AA018683	1481966
AA018866	1482466
AA018886	1482277
AA018888	1482279
AA018892	1482283
AA018979	1482371
AA018980	1482372
AA019152	1482561
AA019316	1482727
AA019320	1482731
AA019335	1482746
AA019377	1482806
AA019445	1482074
AA019482	1482111
AA019498	1482327
AA019511	1482130
AA019538	1482157
AA019781	1483100
AA019874	1483700
AA020899	1484698
AA020941	1484676
AA021037	1484827
AA021115	1484877
AA021247	1484963
AA021434	1485150
AA021513	1485203

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA021544	1485428
AA021585	1485257
AA021603	1485269
AA021623	1485289
AA022453	1486552
AA022473	1486577
AA022495	1486587
AA022583	1486672
AA022601	1486700
AA022635	1486838
AA022663	1486749
AA022783	1486837
AA022937	1487036
AA022949	1487039
AA022965	1487064
AA024398	1489406
AA024459	1489435
AA024480	1489410
AA024532	1489341
AA024581	1489523
AA024637	1489542
AA024795	1489719
AA024899	1489804
AA024963	1489858
AA024967	1489872
AA025089	1490012
AA025112	1490027
AA025142	1490056
AA025287	1489366
AA025373	1490893
AA025434	1490916
AA025538	1490975
AA025551	1490997
AA025601	1491020
AA025694	1491397
AA025731	1491407
AA025834	1491180
AA025875	1491212
AA025937	1491436
AA025968	1491277
AA026149	1492190
AA026288	1492245
AA026343	1492787
AA026399	1492300
AA026609	1492444
AA026630	1492465
AA026658	1492723
AA026682	1492849
AA026715	1492496
AA026797	1493134
AA026983	1493174
AA027037	1493227
AA027090	1493299
AA027126	1493335
AA027147	1492816
AA027862	1493949
AA027868	1493955

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA027882	1493979
AA027912	1493999
AA028008	1494086
AA028103	1494190
AA028145	1494214
AA028171	1494296
AA028887	1496309
AA028987	1496389
AA029039	1496584
AA029070	1496472
AA029143	1496545
AA029157	1496559
AA029276	1496887
AA029295	1496699
AA029403	1497030
AA029415	1496958
AA029428	1496841
AA029490	1496957
AA029566	1497034
AA029567	1497035
AA029578	1496982
AA029584	1496988
AA029673	1497076
AA029676	1497079
AA029722	1497135
AA029835	1496080
AA029881	1496108
AA029889	1496145
AA029947	1496175
AA029997	1496428
AA030004	1496296
AA030046	1496272
AA031287	1501242
AA031293	1501248
AA031360	1501445
AA031367	1501320
AA031483	1501417
AA031513	1501467
AA031528	1501492
AA031624	1501585
AA031762	1501716
AA031795	1501730
AA032084	1502056
AA032194	1502166
AA032220	1502182
AA032221	1502183
AA033517	1505363
AA033537	1505383
AA033564	1505457
AA033651	1505479
AA033869	1505752
AA033901	1505719
AA033907	1505725
AA033951	1505826
AA033973	1505782
AA034014	1505962
AA034094	1505921

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA034115	1505972
AA034179	1505989
AA034186	1505996
AA034226	1506054
AA034237	1506265
AA034255	1506064
AA034322	1506193
AA034436	1506273
AA034516	1506355
AA034912	1506875
AA034945	1507024
AA034946	1506890
AA034979	1506923
AA035001	1506864
AA035012	1507099
AA035090	1507288
AA035102	1507272
AA035144	1507314
AA035171	1507484
AA035189	1507370
AA035347	1506848
AA035384	1507108
AA035450	1507136
AA035549	1507207
AA035558	1507216
AA035559	1507217
AA035580	1507238
AA035604	1507551
AA035667	1507620
AA035730	1507567
AA035742	1507570
AA035745	1507573
AA035773	1507601
AA035790	1507636
AA036798	1509891
AA036823	1509861
AA036974	1510031
AA037024	1510099
AA037126	1512234
AA037138	1512246
AA037143	1512251
AA037172	1512332
AA037190	1512299
AA037210	1512389
AA037216	1512395
AA037217	1512342
AA037425	1512542
AA037450	1512752
AA037483	1512582
AA037554	1512654
AA037574	1512692
AA037620	1512756
AA037683	1512781
AA037828	1512946
AA037857	1512993
AA037877	1513013
AA037886	1513022

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA039274	1515552
AA039354	1515650
AA039381	1515658
AA039504	1515800
AA039506	1515802
AA039546	1515824
AA039713	1515992
AA039734	1516236
AA039750	1516029
AA039807	1516296
AA039812	1516301
AA039851	1516129
AA039967	1516280
AA039998	1516275
AA040037	1516380
AA040127	1516405
AA040135	1516413
AA040140	1516418
AA040180	1516596
AA040209	1516485
AA040265	1516670
AA040332	1516663
AA040405	1516766
AA040424	1516702
AA040437	1516715
AA040439	1516717
AAC40499	1516786
AA040617	1517030
AA040620	1517033
AA040624	1517103
AAC40625	1517104
AAC40673	1516951
AA040694	1517008
AAC40710	1516988
AA040810	1517088
AA040820	1517098
AA040861	1517157
AAC41197	1517612
AA041205	1517439
AAC41239	1517473
AA041250	1517484
AA041467	1517765
AA041494	1517728
AA041499	1517733
AA042812	1522467
AA042813	1522468
AA042858	1522374
AA042928	1522610
AA042990	1522505
AA043109	1520983
AA043133	1521126
AA043137	1520991
AA043141	1520995
AA043159	1521013
AA043228	1521083
AA043347	1521421
AA043415	1521290



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA043431	1521354
AA043501	1521425
AA043552	1521413
AA043594	1521460
AA043692	1521548
AA043802	1521715
AA043865	1522012
AA043891	1521749
AA043951	1521876
AA044004	1521862
AA044118	1521976
AA044123	1521981
AA044187	1522044
AA044209	1522066
AA044239	1522115
AA044291	1522148
AA044416	1522291
AA044565	1522890
AA044570	1522895
AA044586	1522977
AA044591	1522982
AA044599	1522823
AA044652	1522855
AA044659	1523039
AA044662	1523042
AA044691	1522912
AA044697	1522965
AA044750	1522953
AA044786	1523054
AA044791	1522994
AA044896	1523100
AA044903	1523107
AA044906	1523110
AA044941	1523144
AA044960	1523163
AA045074	1523555
AA045115	1523317
AA045147	1523487
AA045175	1523377
AA045185	1523387
AA045240	1523444
AA045300	1523502
AA045340	1523542
AA045342	1523544
AA045367	1523699
AA045381	1523582
AA045388	1523637
AA045410	1523612
AA045436	1523674
AA045508	1523744
AA045524	1523760
AA045574	1525319
AA045584	1525329
AA045606	1525351
AA045665	1525596
AA045673	1525416
AA045698	1525800

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AAC45699	1525801
AAC45709	1525667
AAC45741	1525635
AAC45753	1525647
AAO45792	1525686
AAO45803	1525697
AAO45870	1525809
AAO45879	1525774
AAO45992	1526095
AAO46040	1525934
AAO46083	1525976
AAO46321	1526214
AAO46430	1526341
AAO46483	1524476
AAO46489	1524482
AAO46523	1524626
AAO46577	1524493
AAO46581	1524497
AAO46705	1524602
AAO46763	1524661
AAO46808	1524725
AAO46836	1524735
AAO46848	1524747
AAO46883	1524818
AAO46973	1524871
AAO46981	1524879
AAO47015	1524913
AAO47021	1524937
AAO47213	1525113
AAO47260	1525296
AAO47304	1525220
AAO47332	1525441
AAO47338	1525236
AAO47340	1525238
AAO47432	1525478
AAO47441	1525487
AAO47482	1525657
AAO47517	1525563
AAO47587	1527304
AAO47618	1527272
AAO47704	1527374
AAO47729	1527526
AAC47752	1527422
AAO53129	1544269
AAO53192	1544401
AAC53239	1544449
AAO53250	1544460
AAO53265	1544475
AAO53399	1544036
AAO53459	1544213
AAO53475	1544113
AAC53510	1544337
AAO53514	1544420
AAO53522	1544305
AAO53557	1544341
AAO53684	1544611
AAC53747	1544673

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA053757	1544683
AA053909	1544834
AA053917	1544861
AA053932	1544876
AA054120	1545043
AA054135	1545058
AA054439	1545575
AA054492	1545417
AA054521	1545511
AA054585	1545554
AA054643	1545567
AA054701	1545625
AA054778	1545714
AA055186	1547724
AA055221	1547569
AA055285	1547623
AA055306	1547644
AA055326	1547729
AA055475	1547880
AA055491	1547830
AA055585	1547950
AA055650	1547989
AA055768	1548163
AA055833	1548308
AA055835	1548337
AA055880	1548213
AA055979	1548345
AA056001	1548387
AA056013	1548352
AA056025	1548364
AA056034	1548373
AA056058	1548482
AA056060	1548484
AA056232	1548569
AA056281	1548685
AA056345	1548964
AA056358	1548698
AA056365	1548705
AA056369	1548709
AA056395	1548735
AA056396	1548736
AA056437	1548777
AA056462	1548802
AA056482	1548885
AA056484	1548887
AA056528	1548888
AA056534	1548874
AA056538	1548878
AA056603	1548943
AA056667	1549007
AA056686	1549026
AA056744	1549119
AA057029	1549704
AA057032	1549707
AA057063	1549850
AA057071	1549810
AA057095	1549769

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA057156	1549615
AA057195	1549834
AA057243	1550096
AA057270	1549908
AA057290	1549928
AA057490	1550130
AA057541	1550246
AA057620	1550455
AA057721	1550522
AA057861	1549571
AA057867	1549577
AA058381	1551208
AA058398	1551413
AA058458	1551284
AA058488	1551295
AA058568	1551375
AA058576	1551383
AA058597	1551404
AA058605	1551430
AA058818	1551628
AA058899	1551725
AA058902	1551728
AA058906	1551740
AA059309	1552153
AA059355	1553179
AA062583	1556851
AA062731	1557092
AA062804	1557164
AA062805	1557165
AA062813	1557173
AA062859	1557360
AA062928	1557429
AA062985	1557637
AA062994	1557655
AA063247	1556934
AA063476	1557286
AA063501	1557311
AA063521	1557488
AA063616	1557583
AA063629	1557596
AA064627	1558871
AA064886	1559007
AA064947	1559211
AA065036	1558685
AA065042	1558691
AA065100	1559022
AA065214	1559127
AA065216	1559129
AA069078	1576438
AA069079	1576439
AA069367	1576725
AA069407	1576838
AA069457	1576960
AA069561	1576973
AA069692	1577112
AA069693	1577113
AA069784	1577152

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA069801	1577169
AA069811	1577188
AA069814	1577191
AA069845	1577205
AA069850	1577210
AA069880	1577258
AA070008	1577368
AA070031	1577593
AA070086	1577446
AA070226	1577585
AA070250	1577669
AA070277	1577637
AA070331	1577690
AA070335	1577694
AA070349	1577708
AA070393	1577754
AA070435	1577813
AA070437	1577815
AA070495	1577855
AA070624	1577984
AA070911	1578270
AA070997	1578418
AA071030	1578390
AA071084	1578444
AA071089	1578449
AA071165	1578526
AA071167	1578528
AA071199	1578577
AA071372	1578726
AA071439	1578802
AA071503	1578874
AA071511	1578882
AA074049	1614100
AA074067	1613937
AA074086	1613956
AA074142	1614012
AA074183	1614246
AA074200	1614112
AA074224	1614093
AA074258	1614180
AA074445	1614313
AA074446	1614314
AA074509	1614378
AA074511	1614398
AA074575	1614445
AA074666	1614610
AA074677	1614604
AA074683	1614552
AA074729	1614736
AA074818	1614687
AA074819	1614688
AA074837	1614706
AA074869	1614765
AA075008	1614894
AA075012	1614957
AA075133	1615137
AA075165	1615035

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AAC75189	1615059
AAC75257	1615127
AAC75415	1615478
AA075459	1615330
AAC75460	1615331
AA075474	1615361
AA075515	1615385
AA075530	1615400
AA075600	1615469
AA075645	1615515
AA075781	1615653
AA075810	1615698
AA075922	1615827
AA075981	1615850
AA076077	1615946
AA076171	1616241
AA076260	1616129
AA076295	1616164
AA076430	1616317
AA076504	1616373
AA076593	1616480
AA076964	1836648
AA077283	1836757
AA077906	1837380
AA078218	1837692
AA078872	1617825
AA078904	1617796
AA079041	1617933
AA079188	1618080
AA079346	1618301
AA079366	1618260
AA079524	1618416
AA079690	1618711
AA079706	1618598
AA079755	1617661
AA079869	1618761
AA080889	1623378
AA081003	1623007
AA081007	1623011
AA081082	1623000
AA081169	1623285
AA081218	1623066
AA081355	1623169
AA081426	1623343
AA081708	1623766
AA081712	1623770
AA081751	1623810
AA081788	1623864
AA081800	1623876
AA081812	1624072
AA081815	1623926
AA081842	1623901
AA081973	1624039
AA082063	1624138
AA082087	1624179
AA082209	1624285
AA082281	1624356

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA082342	1624416
AA082437	1624556
AA082477	1624533
AA082502	1624683
AA082572	1624692
AA082629	1624705
AA082685	1624743
AA082754	1624812
AA082812	1624869
AA082829	1624886
AA082839	1624914
AA082936	1624993
AA082943	1625000
AA083008	1625064
AA083026	1625082
AA083096	1625154
AA083148	1625207
AA083191	1625452
AA083207	1625264
AA083286	1625349
AA083300	1625361
AA083345	1625405
AA083370	1625430
AA083410	1625660
AA083411	1625661
AA083472	1625558
AA083479	1625565
AA083481	1625542
AA083482	1625543
AA083485	1625546
AA083510	1625570
AA083514	1625574
AA083573	1625633
AA083603	1625858
AA083654	1625713
AA083671	1625747
AA083772	1625830
AA083794	1625852
AA083836	1625894
AA083868	1625926
AA083941	1625998
AA084068	1626124
AA084197	1626263
AA084221	1626287
AA084517	1626782
AA084552	1626608
AA084560	1626616
AA084698	1626755
AA084987	1627045
AA085283	1627410
AA085459	1628703
AA085480	1628730
AA085483	1628756
AA085603	1629416
AA085632	1629533
AA085748	1629231
AA085759	1629221

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA085810	1629342
AA085824	1629337
AA085835	1629387
AA086007	1629574
AA086087	1629637
AA086128	1629696
AA086204	1629010
AA086326	1629014
AA086377	1629024
AA086475	1629122
AA088187	1633745
AA088231	1633778
AA088322	1633826
AA088344	1633856
AA088371	1633883
AA088372	1633884
AA088517	1634082
AA088544	1634049
AA088603	1634124
AA088606	1634145
AA088655	1634176
AA088679	1634200
AA088701	1634222
AA088714	1634243
AA088755	1634276
AA088758	1634279
AA088770	1634335
AA088850	1634371
AA088886	1633650
AA088914	1633678
AA089566	1636074
AA090023	1636515
AA090106	1636590
AA090203	1636727
AA090548	1635188
AA090625	1635209
AA090790	1635366
AA091245	1635829
AA091275	1635859
AA091277	1635861
AA091445	1636900
AA091998	1637011
AA092060	1637457
AA092224	1637213
AA092316	1637537
AA092343	1637636
AA092532	1637369
AA092533	1637370
AA092596	1637377
AA092811	1637944
AA093276	1633745
AA093359	1638984
AA093935	1639528
AA093974	1639551
AA094000	1639577
AA094331	1639916
AA094583	1640176



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA094656	1640233
AA095002	1640587
AA095049	1640642
AA095478	1641095
AA095753	1641338
AA096121	1641706
AA096320	1641913
AA096453	1642038
AA098801	1648304
AA098824	1644905
AA098867	1645051
AA098876	1644998
AA098896	1645062
AA099023	1644903
AA099080	1645522
AA099110	1644971
AA099141	1645028
AA099148	1645035
AA099262	1645108
AA099369	1645287
AA099399	1645355
AA099404	1645297
AA099424	1646066
AA099431	1645320
AA099520	1645466
AA099523	1645469
AA099568	1645585
AA099572	1645589
AA099582	1645595
AA099593	1645606
AA099602	1645730
AA099631	1645715
AA099718	1645810
AA099820	1645919
AA099855	1645937
AA099875	1645957
AA099878	1645960
AA099896	1646042
AA099917	1646059
AA099952	1646129
AA099976	1646109
AA100133	1646323
AA100195	1646472
AA100296	1646587
AA100486	1646798
AA100674	1647035
AA100696	1648657
AA100707	1647062
AA100852	1647269
AA100876	1647311
AA100885	1647320
AA100987	1647714
AA101155	1647922
AA101173	1647992
AA101208	1647861
AA101224	1648061
AA101237	1647877

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA101270	1647951
AA101276	1647997
AA101299	1648045
AA101476	1648304
AA101632	1648568
AA101674	1648628
AA101742	1648734
AA101777	1648775
AA101799	1648810
AA101833	1645172
AA101840	1645179
AA101878	1645281
AA102068	1645927
AA102159	1646217
AA102183	1646391
AA102274	1646755
AA102280	1646691
AA102570	1647762
AA102591	1647800
AA102605	1647891
AA102670	1648004
AA102698	1648215
AA111855	1663942
AA111892	1663963
AA111969	1664039
AA112162	1664364
AA112198	1664602
AA112308	1664577
AA112310	1664579
AA112441	1664851
AA112515	1665064
AA112626	1665327
AA112660	1665361
AA112710	1663810
AA112869	1664220
AA112936	1664286
AA112979	1664450
AA113333	1665237
AA113347	1665187
AA113403	1665305
AA113811	1667672
AA113823	1667801
AA113952	1667829
AA114003	1668008
AA114014	1667891
AA114061	1667997
AA114062	1667998
AA114078	1668143
AA114106	1667982
AA114853	1669884
AA114854	1669885
AA114945	1670040
AA114952	1670065
AA114967	1670182
AA115021	1670274
AA115076	1670339
AA115215	1670044

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA115259	1670437
AA115297	1670475
AA115300	1670497
AA115310	1670627
AA115492	1670163
AA115512	1669972
AA115537	1670199
AA115559	1670404
AA115588	1670232
AA115604	1670248
AA115636	1670771
AA115742	1670755
AA115761	1670792
AA115838	1670916
AA115933	1670950
AA116061	1671093
AA120779	1678093
AA120781	1678095
AA120782	1678096
AA120816	1678011
AA120818	1678013
AA120849	1678245
AA120852	1678322
AA120953	1678358
AA120964	1678369
AA121072	1678675
AA121127	1678688
AA121145	1678834
AA121266	1678899
AA121387	1679010
AA121390	1679013
AA121419	1679096
AA121428	1679105
AA121471	1679085
AA121504	1679118
AA121615	1679230
AA121625	1679256
AA121656	1679269
AA121732	1679346
AA121836	1679529
AA121923	1677937
AA121941	1677954
AA122048	1678067
AA122080	1678118
AA122129	1678250
AA122237	1678538
AA122245	1678484
AA125809	1688020
AA125817	1687493
AA125825	1685546
AA125961	1685627
AA125989	1685663
AA126009	1685675
AA126025	1685691
AA126029	1685695
AA126121	1685796
AA126128	1685819

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA126259	1687876
AA126356	1686004
AA126373	1685985
AA126468	1686098
AA126472	1686102
AA126621	1686196
AA126666	1686222
AA126682	1687580
AA126708	1687588
AA126729	1686293
AA126742	1686242
AA126750	1686250
AA126754	1686254
AA126799	1686281
AA126809	1686309
AA126834	1686316
AA126921	1687896
AA126951	1686403
AA127029	1687899
AA127069	1687662
AA127100	1687677
AA127135	1686495
AA127136	1686480
AA127185	1686545
AA127220	1687685
AA127336	1686643
AA127369	1686658
AA127436	1686832
AA127493	1686783
AA127552	1686824
AA127674	1686962
AA127714	1687003
AA127861	1687141
AA128005	1687285
AA128104	1687383
AA128114	1687998
AA128297	1688383
AA128306	1688356
AA128324	1688392
AA128348	1688435
AA128387	1689834
AA128391	1689838
AA128407	1689705
AA128442	1689853
AA128498	1688495
AA128536	1688508
AA128591	1688535
AA128617	1689602
AA128647	1688607
AA128668	1688603
AA128739	1689610
AA128768	1688659
AA128952	1688735
AA129003	1688786
AA129135	1688902
AA129171	1688955
AA129217	1689086

Table 6

<u>ACC. NO.</u>	<u>-----</u>
AA129245	1689029
AA129297	1689030
AA129501	1689366
AA129551	1689316
AA129552	1689317
AA129574	1689339
AA129613	1689380
AA129650	1690081
AA129677	1690088
AA129726	1690181
AA129772	1690193
AA129777	1690188
AA129781	1689412
AA129907	1689483
AA129909	1689667
AA129931	1689507
AA129962	1689684
AA129964	1689521
AA130017	1690879
AA130042	1691037
AA130162	1691165
AA130207	1691211
AA130229	1691233
AA130262	1691539
AA130271	1691476
AA130302	1691446
AA130349	1691492
AA130428	1691711
AA130515	1691798
AA130529	1691812
AA130555	1692108
AA130579	1692001
AA130615	1692238
AA130677	1692185
AA130784	1692450
AA130797	1692295
AA130857	1692345
AA130873	1692361
AA130690	1692397
AA130928	1692418
AA130946	1692436
AA130955	1692462
AA130984	1692475
AA131077	1692567
AA131198	1692690
AA131227	1692735
AA131233	1692741
AA131239	1692766
AA131240	1692767
AA131252	1692814
AA131284	1692774
AA131313	1692820
AA131327	1692825
AA131406	1692893
AA131466	1693089
AA131516	1693022
AA131526	1693077

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA131640	1693166
AA131707	1693197
AA131749	1693275
AA131793	1693282
AA131812	1693319
AA131828	1693381
AA131834	1693324
AA131885	1693437
AA131909	1693407
AA131926	1693424
AA131961	1693653
AA132219	1693710
AA132226	1693717
AA132342	1693832
AA132508	1694199
AA132510	1694201
AA132574	1694081
AA132596	1694085
AA132633	1694122
AA132689	1694179
AA132690	1694180
AA132792	1694485
AA132798	1694347
AA132802	1694351
AA132844	1694333
AA132857	1694362
AA132862	1694555
AA132904	1694391
AA132956	1694454
AA132992	1694561
AA133030	1694538
AA133044	1694569
AA133068	1694593
AA133071	1694596
AA133165	1689945
AA133166	1689946
AA133228	1690214
AA133248	1690341
AA133266	1690234
AA133268	1690236
AA133276	1690244
AA133307	1690347
AA133361	1690329
AA133382	1690384
AA133452	1690474
AA133469	1690437
AA133503	1690623
AA133554	1690524
AA133579	1690549
AA133590	1690603
AA133652	1690638
AA133692	1690660
AA133698	1690666
AA133721	1690707
AA133724	1690710
AA133742	1690774
AA133757	1690725

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA133788	1690756
AA133798	1690785
AA133896	1689546
AA133959	1691026
AA133982	1691068
AA134016	1691084
AA134022	1691090
AA134023	1691091
AA134031	1691099
AA134032	1691100
AA134126	1691471
AA134203	1691620
AA134234	1691590
AA134266	1691640
AA134267	1691641
AA134311	1691666
AA134321	1691676
AA134377	1691871
AA134527	1692092
AA134576	1695573
AA134701	1695360
AA134715	1695319
AA134726	1695303
AA134770	1695436
AA134778	1695407
AA134862	1695363
AA135001	1696102
AA135049	1696151
AA135065	1696167
AA135104	1696231
AA135135	1697032
AA135222	1696324
AA135254	1696373
AA135384	1696495
AA135454	1696503
AA135456	1696505
AA135663	1696702
AA135809	1696820
AA135812	1696823
AA135870	1696844
AA135875	1696849
AA135886	1696860
AA135911	1697229
AA136049	1697259
AA136060	1697270
AA136071	1697281
AA136096	1697324
AA136125	1697335
AA136150	1697360
AA136163	1697419
AA136215	1697527
AA136221	1697431
AA136296	1697504
AA136351	1697559
AA136386	1697730
AA136404	1697614
AA136437	1697647

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA136618	1697881
AA136664	1697892
AA136699	1697909
AA136710	1697920
AA136794	1698003
AA136808	1698017
AA136830	1698247
AA136874	1698084
AA136944	1698154
AA137072	1698289
AA137078	1698295
AA137144	1698379
AA137165	1696943
AA137170	1697210
AA142865	1712289
AA142869	1712293
AA142913	1712300
AA142922	1712428
AA142923	1712429
AA143012	1712389
AA143021	1712398
AA143034	1712411
AA143170	1712540
AA143242	1712613
AA143252	1712623
AA143286	1712657
AA143438	1712808
AA143467	1712855
AA143523	1712894
AA143548	1713117
AA143578	1712950
AA143579	1712951
AA143604	1712992
AA143634	1713004
AA146582	1716005
AA146589	1716073
AA146616	1716014
AA146701	1716091
AA146826	1716208
AA146900	1716290
AA146916	1716336
AA146941	1716313
AA146981	1716476
AA147100	1716491
AA147214	1716587
AA147341	1716713
AA147403	1716774
AA147499	1716870
AA147507	1716878
AA147594	1716983
AA147608	1717043
AA147659	1717048
AA147812	1717384
AA147826	1717198
AA147837	1717209
AA147871	1717261
AA147898	1717271



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA147902	1717275
AA147911	1717284
AA147980	1717354
AA147986	1717360
AA148002	1717376
AA148019	1717419
AA148034	1717409
AA148087	1717646
AA148006	1717613
AA148215	1717721
AA148219	1717725
AA148250	1717632
AA148262	1717644
AA148268	1717666
AA148269	1717667
AA148505	1721549
AA148569	1721593
AA148729	1719240
AA148735	1719246
AA148780	1721831
AA148822	1721659
AA148831	1721668
AA148862	1719158
AA149080	1719370
AA149096	1719549
AA149219	1719654
AA149337	1719089
AA149415	1719931
AA149421	1719937
AA149490	1720326
AA149492	1720328
AA149543	1720344
AA149551	1720352
AA149579	1720380
AA149624	1720425
AA149637	1720438
AA149852	1720932
AA149936	1721088
AA149979	1721132
AA150001	1721154
AA150033	1721319
AA150156	1721377
AA150220	1721731
AA150267	1721788
AA150309	1721839
AA150320	1721888
AA150361	1721873
AA150369	1721900
AA150383	1721914
AA150401	1721977
AA150421	1721934
AA150422	1721935
AA150435	1721948
AA150459	1721990
AA150480	1721994
AA150500	1722014
AA150502	1722016

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA150507	1722021
AA150619	1722197
AA150650	1722162
AA150672	1722203
AA150777	1722288
AA150780	1722338
AA150823	1722353
AA150839	1722414
AA150860	1722371
AA150875	1722386
AA150891	1722421
AA150918	1722429
AA150928	1722439
AA151002	1722513
AA151012	1722523
AA151018	1722529
AA151163	1719283
AA151350	1719895
AA151401	1719737
AA151486	1719991
AA151506	1720046
AA151596	1720083
AA151659	1720214
AA151796	1720491
AA151830	1720525
AA151917	1720790
AA151979	1721096
AA151988	1720962
AA152009	1720847
AA152073	1720985
AA152109	1721221
AA152178	1721230
AA152264	1721601
AA152266	1721603
AA152276	1721679
AA152337	1719171
AA152347	1719259
AA152408	1718618
AA152440	1719097
AA155695	1727311
AA155787	1727404
AA155828	1727446
AA155856	1727474
AA155865	1727500
AA155999	1727666
AA156022	1727647
AA156030	1727655
AA156040	1727820
AA156054	1727679
AA156092	1727708
AA156112	1727728
AA156202	1727836
AA156215	1727895
AA156239	1727857
AA156244	1727862
AA156342	1727976
AA156369	1727985

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA156433	1728058
AA156599	1728344
AA156690	1728304
AA156743	1728570
AA156782	1728397
AA156790	1728405
AA156795	1728410
AA156802	1728435
AA156862	1728477
AA156873	1728488
AA156879	1728512
AA156886	1728700
AA156926	1728541
AA156940	1728555
AA156971	1728777
AA156987	1728602
AA157008	1728652
AA157129	1728737
AA157150	1728758
AA157163	1728787
AA157261	1728869
AA157267	1728875
AA157466	1729073
AA157632	1729240
AA157652	1729293
AA157723	1729348
AA157733	1729358
AA157741	1729366
AA157787	1732598
AA157813	1732642
AA157816	1732645
AA157875	1732686
AA158035	1732828
AA158098	1732917
AA158162	1732956
AA158211	1733022
AA158274	1733138
AA158346	1733157
AA158507	1733318
AA158735	1733529
AA158922	1733733
AA159044	1733847
AA159068	1733862
AA159179	1733972
AA159181	1733974
AA159272	1734074
AA159497	1735040
AA159577	1735128
AA159578	1735129
AA159613	1741841
AA159647	1741830
AA159656	1734689
AA159714	1734360
AA159748	1741796
AA159771	1741801
AA159774	1741804
AA159792	1734632

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA159847	1735079
AA159849	1735081
AA159910	1734637
AA160002	1734493
AA160053	1734513
AA160080	1734579
AA160149	1734597
AA160380	1735174
AA160606	1736052
AA160630	1736007
AA160670	1736055
AA160677	1736062
AA160695	1736261
AA160999	1735706
AA161003	1735290
AA161097	1735333
AA161188	1735442
AA161217	1735462
AA161248	1735493
AA161283	1735519
AA161466	1735905
AA164301	1741248
AA164369	1741316
AA164405	1740715
AA164473	1740650
AA164607	1740775
AA164677	1740838
AA164703	1741076
AA164782	1740943
AA164836	1741059
AA164977	1740341
AA164983	1740409
AA165027	1740273
AA165082	1740310
AA165090	1740318
AA165117	1740372
AA165148	1740421
AA165152	1740425
AA165164	1740392
AA165165	1740393
AA165197	1740633
AA165205	1740497
AA165243	1740471
AA165290	1740518
AA165313	1740541
AA165339	1741488
AA165402	1741435
AA165512	1741529
AA165562	1741586
AA165593	1741617
AA165632	1741665
AA165639	1741672
AA165678	1741729
AA166675	1745130
AA166703	1745193
AA166707	1745346
AA166853	1745071

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA166907	1745417
AA166925	1745301
AA166952	1745328
AA167011	1745386
AA167044	1745437
AA167084	1745460
AA167120	1745549
AA167150	1745526
AA167252	1745646
AA167269	1745706
AA167338	1745730
AA167366	1745743
AA167399	1745846
AA167500	1745886
AA167674	1744833
AA167677	1744836
AA167696	1744855
AA167719	1744931
AA167728	1744878
AA167766	1744916
AA167804	1744955
AA167826	1744977
AA167829	1744980
AA169121	1748241
AA169154	1747829
AA169173	1747745
AA169192	1747768
AA169276	1748289
AA169374	1748314
AA169379	1748319
AA169475	1747882
AA169493	1748207
AA169507	1747913
AA169520	1747926
AA169606	1747994
AA169638	1748220
AA169645	1748227
AA169736	1748350
AA169794	1748129
AA171426	1750753
AA171454	1750510
AA171459	1750517
AA171510	1750569
AA171516	1750575
AA171587	1750656
AA171603	1750674
AA171618	1750694
AA171679	1750755
AA171706	1750791
AA171784	1750840
AA171807	1750865
AA171830	1750906
AA171872	1750930
AA171883	1750941
AA171899	1750975
AA172043	1751119
AA172056	1751150

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA172103	1751161
AA172156	1751215
AA172188	1751265
AA172195	1751272
AA172239	1751298
AA172266	1751334
AA172372	1751420
AA173098	1753340
AA173109	1753445
AA173184	1754399
AA173189	1754404
AA173331	1753658
AA173348	1753479
AA173363	1753494
AA173391	1753732
AA173459	1753625
AA173460	1753626
AA173522	1753672
AA173559	1753691
AA173598	1753748
AA173721	1753855
AA173926	1754058
AA173948	1754098
AA173952	1754128
AA173990	1754121
AA173997	1754290
AA173998	1754291
AA174144	1754286
AA176178	1757300
AA176331	1757489
AA176607	1757795
AA176747	1757904
AA176784	1757933
AA176833	1757965
AA176847	1757979
AA176867	1758071
AA176979	1758127
AA177050	1758198
AA177054	1758202
AA177062	1758210
AA177127	1758285
AA178907	1760276
AA179098	1760450
AA179105	1760457
AA179161	1760512
AA179187	1760556
AA179315	1760667
AA179362	1760713
AA179409	1760961
AA179442	1760794
AA179462	1760830
AA179487	1760847
AA179567	1760935
AA179664	1761878
AA179691	1761924
AA180137	1761403
AA180154	1761446

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA180163	1761627
AA180204	1761470
AA180270	1761537
AA180398	1761662
AA180453	1761717
AA180817	1764292
AA180845	1764320
AA180914	1764390
AA180941	1764433
AA181017	1764219
AA181102	1764568
AA181111	1764577
AA181113	1764596
AA181179	1764664
AA181392	1764876
AA181526	1765010
AA181580	1765046
AA181618	1765085
AA181646	1765113
AA181723	1765190
AA181767	1765234
AA181855	1765322
AA181995	1765496
AA182409	1766232
AA182457	1766155
AA182502	1766201
AA182513	1766212
AA182617	1766506
AA182680	1766519
AA182804	1766530
AA182839	1766556
AA182848	1766582
AA182948	1766631
AA186335	1774563
AA186346	1774631
AA186364	1774465
AA186399	1774699
AA186406	1774706
AA186432	1774532
AA186477	1774694
AA186538	1774764
AA186586	1774685
AA186608	1774783
AA186613	1774771
AA186733	1774850
AA186755	1774855
AA186804	1774922
AA186895	1774997
AA187207	1773433
AA187287	1773496
AA187288	1773497
AA187351	1773561
AA187383	1773576
AA187395	1773621
AA187426	1773745
AA187576	1773769
AA187595	1773788

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA187604	1773797
AA187629	1773883
AA187659	1773851
AA187679	1773871
AA187710	1774043
AA187762	1774031
AA187789	1773983
AA187809	1774003
AA187817	1774011
AA187928	1774120
AA187982	1774429
AA187998	1774189
AA188045	1774295
AA188051	1774244
AA188052	1774245
AA188065	1774258
AA188101	1774354
AA188140	1774332
AA188169	1774370
AA188228	1774430
AA188312	1775338
AA188315	1775341
AA188366	1775400
AA188396	1775430
AA188591	1775616
AA188633	1775863
AA188710	1775797
AA188771	1776003
AA188780	1775871
AA188854	1775943
AA188867	1775894
AA188875	1775902
AA188918	1776005
AA188999	1776024
AA189106	1776158
AA189113	1776165
AA189150	1776194
AA190313	1779023
AA190408	1779239
AA190529	1779522
AA190561	1779536
AA190615	1779781
AA190634	1779747
AA190661	1779073
AA190674	1779018
AA190676	1779020
AA190747	1779133
AA190779	1779361
AA190789	1779174
AA190825	1779210
AA190843	1779416
AA190850	1779496
AA190852	1779498
AA190873	1779393
AA190890	1779428
AA190914	1779570
AA190997	1779702



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA190998	1779703
AA191045	1779655
AA191092	1779684
AA191119	1779813
AA191134	1779828
AA191211	1779905
AA191245	1779952
AA191424	1780103
AA191461	1780168
AA191476	1780138
AA191495	1780175
AA191512	1780237
AA191518	1780181
AA191536	1780199
AA191548	1780211
AA191552	1780215
AA191661	1780332
AA191719	1780399
AA191721	1780401
AA192527	1781749
AA192597	1781819
AA192604	1781826
AA192759	1782155
AA192765	1782162
AA192784	1782193
AA193086	1782574
AA193247	1782657
AA193254	1782699
AA193297	1782689
AA193346	1782936
AA193411	1783011
AA193455	1782846
AA193661	1783072
AA194062	1783808
AA194162	1783853
AA194189	1783943
AA194374	1784080
AA194429	1784190
AA194473	1784169
AA194517	1784213
AA194535	1784231
AA194577	1784338
AA194646	1784553
AA194754	1784444
AA194860	1784572
AA194988	1784690
AA195010	1784712
AA195015	1784717
AA195044	1784987
AA195063	1784827
AA195145	1784917
AA195151	1784840
AA195259	1784959
AA195377	1785090
AA195470	1785193
AA195525	1785108
AA195560	1785264

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA195579	1785283
AA195601	1785305
AA195617	1783794
AA195631	1785340
AA195668	1785346
AA195734	1785433
AA195751	1785450
AA195831	1791422
AA195947	1791538
AA196001	1791625
AA196287	1791869
AA196357	1791932
AA196392	1791951
AA196465	1792039
AA196486	1792044
AA196558	1792141
AA196597	1792188
AA196978	1792569
AA196979	1792570
AA197003	1792594
AA197234	1792925
AA197344	1791370
AA199658	1795365
AA199717	1795425
AA199807	1795511
AA199881	1795588
AA203110	1798853
AA203119	1798871
AA203172	1798882
AA203182	1798892
AA203206	1798916
AA203237	1799127
AA203252	1798970
AA203285	1799011
AA203462	1799327
AA203492	1799465
AA203537	1799248
AA203592	1799301
AA203637	1799356
AA204650	1802633
AA204701	1802552
AA204703	1802554
AA204781	1802789
AA204830	1802846
AA204847	1802855
AA204854	1802862
AA204856	1802881
AA205033	1803023
AA205320	1803310
AA205412	1803420
AA205413	1803541
AA205496	1803613
AA205546	1803554
AA205647	1803639
AA205803	1801192
AA205857	1801228
AA205858	1801229

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA205870	1801441
AA205928	1801315
AA205949	1801381
AA205996	1801367
AA206004	1801393
AA206115	1801486
AA206137	1801503
AA206147	1801535
AA206194	1801591
AA206214	1801602
AA206267	1801637
AA206311	1801681
AA206356	1801806
AA206540	1801921
AA206546	1801927
AA206581	1801961
AA206647	1802017
AA206675	1802045
AA206721	1802091
AA206769	1802346
AA206865	1802235
AA206914	1802491
AA206991	1801246
AA207105	1802456
AA207266	1802759
AA209369	1807295
AA209498	1807467
AA210741	1809404
AA210760	1809414
AA210833	1809523
AA210840	1809475
AA210898	1809544
AA211448	1810093
AA211483	1810137
AA211498	1810152
AA211565	1810219
AA211653	1810299
AA211799	1810435
AA213548	1812135
AA213619	1812256
AA213667	1812286
AA213669	1812238
AA214031	1812669
AA214648	1913302
AA214668	1813322
AA214688	1814476
AA214710	1914498
AA215284	1915047
AA215332	1915086
AA215538	1915292
AA215623	1815391
AA215777	1815531
AA215793	1915574
AA215800	1815553
AA215927	1815866
AA216133	1916072
AA216211	1816150

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA216391	1816352
AA216409	1816361
AA216433	1816397
AA216669	1817395
AA216690	1817372
AA218536	1832711
AA218606	1832681
AA218693	1832785
AA218788	1832880
AA218858	1832986
AA218936	1833002
AA219045	1833137
AA219060	1833179
AA219116	1833343
AA219143	1833208
AA219224	1833298
AA219264	1833329
AA219315	1833381
AA219458	1833514
AA219582	1833641
AA219705	1833788
AA220219	1838248
AA220921	1839676
AA220966	1839709
AA220970	1839713
AA223148	1843707
AA223249	1843790
AA223306	1843830
AA223320	1843941
AA223425	1844136
AA223433	1844000
AA223564	1844148
AA223774	1844333
AA223956	1844551
AA224124	1844683
AA224132	1844691
AA224230	1844755
AA224269	1844828
AA224487	1845130
AA224528	1845053
AA224548	1845073
AA224751	1846097
AA224784	1846208
AA224876	1846242
AA224953	1846262
AA224985	1846276
AA224994	1846285
AA225002	1846311
AA225025	1846389
AA225114	1846488
AA225115	1846489
AA225154	1846520
AA225294	1846612
AA225438	1846765
AA225458	1846803
AA225488	1846815
AA225515	1846823

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA225517	1846825
AA225843	1847151
AA225857	1847165
AA225865	1847173
AA226012	1847339
AA226101	1847438
AA226137	1847500
AA226171	1847487
AA226234	1847561
AA226266	1847583
AA226275	1847592
AA226321	1847697
AA226340	1847647
AA226359	1847656
AA226430	1847736
AA226611	1847919
AA226709	1848034
AA226735	1848306
AA226898	1848479
AA227000	1848571
AA227059	1848622
AA227105	1848650
AA227326	1848962
AA227506	1849051
AA227549	1849102
AA227579	1849195
AA227647	1849209
AA227695	1849249
AA227789	1849343
AA227830	1849393
AA227837	1849408
AA227846	1849417
AA227873	1849426
AA228012	1849563
AA228130	1849692
AA228273	1849853
AA228282	1849843
AA228431	1849982
AA228440	1850000
AA228622	1851679
AA228836	1851723
AA228845	1851654
AA228940	1851759
AA228953	1851772
AA229057	1852041
AA229145	1850997
AA229183	1851044
AA229199	1851031
AA229225	1851057
AA229424	1851328
AA229495	1851569
AA229513	1851502
AA229607	1851604
AA229611	1851608
AA229713	1851876
AA229745	1851839
AA229872	1852224

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA229993	1852287
AA230067	1852360
AA230169	1852500
AA232147	1855502
AA232186	1855558
AA232249	1855602
AA232374	1855160
AA232645	1855647
AA232686	1855688
AA232691	1855703
AA232700	1853900
AA232734	1855727
AA232738	1855731
AA232843	1855973
AA233021	1856014
AA233053	1856065
AA233070	1856186
AA233073	1856189
AA233088	1856082
AA233109	1856103
AA233131	1856207
AA233233	1856236
AA233409	1856422
AA233428	1856485
AA233549	1856602
AA233687	1856680
AA233689	1856699
AA233733	1856764
AA233791	1856793
AA233809	1856811
AA233867	1856879
AA233868	1856880
AA233943	1855138
AA234050	1858191
AA234073	1859091
AA234092	1858897
AA234130	1858067
AA234135	1858347
AA23414	1858244
AA234300	1858593
AA234318	1858720
AA234464	1858983
AA234533	1859152
AA234578	1859069
AA234646	1859139
AA234667	1859178
AA234698	1859191
AA234818	1859348
AA234990	1858122
AA235116	1859553
AA235224	1859662
AA235370	1859808
AA235581	1860019
AA235802	1860239
AA235838	1860276
AA235914	1860353
AA236057	1860765

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA236320	1858509
AA236323	1858512
AA236371	1858514
AA236418	1858543
AA236561	1858833
AA236667	1860705
AA236720	1860740
AA236774	1860839
AA236865	1860895
AA236904	1860934
AA236986	1861014
AA242864	1873858
AA242891	1873684
AA242951	1873746
AA243065	1873878
AA243142	1874137
AA243143	1874138
AA243230	1874023
AA243361	1874218
AA243573	1874578
AA243696	1874488
AA243809	1874620
AA243835	1874646
AA243980	1874809
AA244003	1874726
AA244018	1874741
AA244052	1875041
AA244066	1874818
AA244071	1874775
AA244099	1874803
AA244116	1874848
AA244158	1874861
AA244184	1874905
AA244207	1874909
AA247232	1878689
AA247638	1879471
AA247736	1879873
AA247816	1880025
AA248319	1879036
AA248427	1879264
AA249118	1879747
AA249154	1879783
AA249195	1879852
AA250748	1885903
AA250846	1885808
AA250854	1885834
AA250903	1885863
AA250947	1885973
AA251114	1886076
AA251178	1886143
AA251182	1886147
AA251201	1886165
AA251242	1886205
AA251262	1886225
AA251303	1886484
AA251321	1886284
AA251386	1886413

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA251578	1886542
AA251627	1886591
AA251644	1886608
AA251678	1886641
AA251770	1886778
AA251784	1886746
AA251826	1886853
AA252355	1887318
AA252436	1887407
AA252468	1887449
AA252849	1887848
AA252943	1882696
AA253248	1882957
AA253254	1882963
AA253269	1882978
AA253339	1885439
AA253384	1885689
AA253442	1885634
AA253444	1885636
AA253453	1885754
AA253464	1885639
AA255502	1892406
AA255526	1892285
AA255529	1892288
AA255551	1892310
AA255576	1892548
AA255577	1892549
AA255695	1892633
AA255717	1892655
AA255761	1891319
AA255954	1891521
AA255974	1891650
AA256117	1891675
AA256157	1891696
AA256231	1891770
AA256248	1891787
AA256290	1891827
AA256297	1891834
AA256330	1891867
AA256401	1891958
AA256403	1891960
AA256420	1892179
AA256422	1892181
AA256458	1891996
AA256507	1892114
AA256591	1892130
AA256724	1892622
AA256757	1892521
AA257014	1891143
AA257955	1894405
AA257973	1894468
AA258003	1894435
AA258079	1894511
AA258089	1894521
AA258357	1893489
AA258513	1893638
AA258750	1893873



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA258904	1894047
AA258916	1894261
AA259025	1894296
AA259062	1894342
AA259115	1894550
AA259166	1894601
AA259189	1894716
AA261819	1897716
AA261873	1897725
AA261889	1897932
AA261968	1897949
AA261990	1897971
AA262080	1898204
AA262123	1898249
AA262211	1898482
AA262226	1898497
AA262296	1898568
AA262345	1898766
AA262494	1897873
AA262508	1898003
AA262513	1897875
AA262537	1897899
AA262559	1898011
AA262573	1898136
AA262588	1898023
AA262683	1898095
AA262783	1898338
AA263002	1898824
AA263040	1898838
AA263042	1898840
AA263145	1898951
AA263153	1898959
AA263162	1898968
AA278195	1920153
AA278241	1920181
AA278320	1920159
AA278357	1921665
AA278382	1921626
AA278408	1919836
AA278445	1919782
AA278473	1919792
AA278475	1919794
AA278520	1919858
AA278642	1919962
AA278729	1920049
AA278749	1920096
AA278757	1920285
AA278759	1920287
AA278785	1920106
AA278842	1920363
AA278956	1920495
AA279054	1920519
AA279060	1920525
AA279145	1920611
AA279172	1920655
AA279262	1920936
AA279347	1920811

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA279409	1920938
AA279517	1920982
AA279853	1921318
AA279949	1921414
AA279990	1921519
AA280054	1921592
AA280080	1921554
AA280089	1921563
AA280091	1921565
AA280221	1921759
AA280256	1921794
AA280288	1922026
AA280381	1922038
AA280406	1921944
AA280647	1924757
AA280694	1923375
AA280735	1923414
AA280753	1923432
AA280848	1923546
AA280873	1923553
AA280876	1923556
AA280917	1923597
AA280952	1923633
AA281132	1923830
AA281307	1923988
AA281504	1924201
AA281637	1924316
AA281653	1924556
AA281784	1924464
AA281793	1924620
AA282023	1924855
AA282134	1925013
AA282159	1925240
AA282215	1925131
AA282252	1925186
AA282253	1925187
AA282272	1925386
AA282273	1925387
AA282286	1925202
AA282382	1925298
AA282594	1925510
AA282734	1925660
AA282837	1925797
AA282956	1925870
AA282983	1925916
AA283007	1925931
AA283029	1925953
AA283112	1926055
AA283169	1926103
AA283616	1927889
AA283693	1927905
AA283704	1927916
AA283746	1928027
AA283904	1928378
AA283949	1928247
AA284064	1928345
AA284072	1928353

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA284108	1928585
AA284113	1928590
AA284161	1928462
AA284172	1928665
AA284267	1928600
AA284278	1928560
AA284280	1928562
AA284283	1928565
AA284285	1928567
AA284291	1928573
AA284307	1928606
AA284337	1928617
AA284410	1928690
AA284494	1928811
AA284506	1928850
AA284555	1927484
AA284615	1927544
AA284634	1927750
AA284642	1927553
AA284748	1927289
AA284806	1927529
AA284835	1927376
AA284856	1927415
AA284971	1927652
AA284997	1927885
AA285038	1927719
AA285040	1927721
AA285043	1927724
AA285053	1927734
AA285089	1927843
AA285290	1929600
AA285341	2947919
AA285678	1933069
AA285708	1933704
AA285754	1933617
AA286814	1933677
AA286841	1933866
AA286914	1933939
AA286953	1933960
AA286965	1933972
AA287067	1934091
AA287122	1934147
AA287199	1934250
AA287323	1933023
AA287347	1933030
AA287375	1933057
AA287404	1933139
AA287511	1933192
AA287561	1933243
AA287589	1933271
AA287665	1933348
AA287720	1933411
AA287721	1933412
AA287751	1933634
AA287936	1933759
AA287948	1933771
AA287961	1933917

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA290591	1938853
AA290737	1938594
AA290783	1938634
AA291041	1939019
AA291137	1939133
AA291220	1939198
AA291233	1939211
AA291260	1939238
AA291325	1939330
AA291363	1939341
AA291407	1939403
AA291436	1939415
AA291556	1939730
AA291602	1939579
AA291680	1939658
AA291742	1939721
AA291749	1939745
AA291756	1939752
AA291764	1939760
AA291773	1939941
AA291788	1939765
AA291972	1940028
AA292011	1939988
AA292054	1940040
AA292131	1940109
AA292132	1940110
AA292158	1940136
AA292179	1940174
AA292226	1940362
AA292273	1940253
AA292281	1940261
AA292429	1940408
AA292443	1940422
AA292583	1940577
AA292638	1940623
AA292642	1940627
AA292655	1940711
AA292692	1940686
AA292739	1941693
AA292786	1941608
AA292796	1941618
AA292866	1941687
AA292871	1941852
AA292993	1940906
AA292995	1940908
AA293027	1940923
AA293028	1940924
AA293036	1940932
AA293047	1940943
AA293050	1940946
AA293215	1941363
AA293629	1941280
AA293802	1941725
AA293819	1941742
AA293855	1941833
AA293873	1941801
AA293885	1941813

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA295182	1947516
AA295706	1948051
AA295737	1948132
AA295762	1948097
AA295789	1948123
AA295996	1948333
AA296074	1948410
AA296152	1948496
AA296186	1948560
AA296237	1948531
AA296282	1948657
AA296298	1948632
AA296326	1948701
AA296465	1948799
AA296502	1948836
AA296534	1948940
AA296690	1949132
AA296812	1949146
AA296846	1949180
AA296970	1949355
AA297097	1949451
AA297215	1949549
AA297270	1949767
AA297402	1949735
AA297432	1949927
AA297434	1949929
AA297472	1949805
AA297506	1949860
AA297512	1949866
AA297592	1950078
AA297647	1949981
AA297750	1950103
AA297883	1950216
AA297941	1950295
AA298085	1950481
AA298104	1950436
AA298199	1950530
AA298285	1950628
AA298294	1950637
AA298464	1950807
AA298475	1950818
AA298489	1950842
AA298490	1950843
AA298549	1950882
AA298593	1950976
AA298596	1950979
AA298732	1951085
AA298773	1951105
AA298786	1951118
AA298794	1951126
AA298807	1951139
AA298967	1951299
AA298986	1951338
AA299140	1951564
AA299209	1951550
AA299404	1951976
AA299541	1951873

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA299594	1951925
AA299595	1951926
AA299668	1952071
AA299830	1952394
AA299840	1952171
AA299892	1952244
AA299961	1952291
AA300008	1952412
AA300065	1952416
AA300262	1952595
AA300440	1952813
AA300659	1953065
AA300728	1953296
AA300869	1953201
AA301096	1953543
AA301205	1953538
AA301391	1953945
AA301408	1953742
AA301513	1953847
AA301629	1954113
AA301666	1954009
AA301753	1954096
AA301795	1954199
AA301907	1954240
AA301983	1954316
AA302313	1954644
AA302457	1954788
AA302480	1954811
AA302548	1954920
AA302852	1955248
AA302919	1955270
AA302986	1955316
AA303172	1955689
AA303184	1955537
AA303257	1955590
AA303334	1955668
AA303594	1955986
AA303657	1956009
AA303682	1956034
AA303696	1956038
AA303796	1956127
AA303880	1956212
AA303924	1956409
AA303960	1956293
AA304025	1956358
AA304651	1957302
AA304827	1957382
AA304845	1957172
AA304846	1957173
AA304947	1957274
AA304979	1957326
AA305030	1957356
AA305081	1957483
AA305121	1957449
AA305143	1957492
AA305193	1957520
AA305231	1957578

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA305315	1957683
AA305319	1957687
AA305331	1957895
AA305333	1957897
AA305358	1957725
AA305409	1957811
AA305494	1958072
AA305506	1957851
AA305566	1957913
AA305599	1957924
AA305627	1957952
AA305657	1958023
AA305774	1958102
AA305819	1958147
AA305824	1958152
AA305895	1958225
AA305909	1958258
AA305951	1958280
AA305969	1958298
AA306028	1958355
AA306040	1958562
AA306129	1958457
AA306182	1958510
AA306206	1958534
AA306223	1958551
AA306232	1958560
AA306264	1958592
AA306322	1958670
AA306372	1958699
AA306378	1958705
AA306402	1958750
AA306413	1958811
AA306480	1958829
AA306540	1958869
AA306573	1959135
AA306668	1959221
AA306772	1959100
AA306787	1959115
AA306812	1959293
AA306876	1959204
AA306883	1959211
AA306888	1959237
AA306902	1959382
AA306956	1959286
AA306982	1959472
AA306983	1959384
AA307033	1959362
AA307101	1959431
AA307103	1959433
AA307209	1959557
AA307224	1959613
AA307247	1959575
AA307286	1959634
AA307371	1959720
AA307475	1960023
AA307513	1959842
AA307539	1959909

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA307579	1959948
AA307590	1959920
AA307612	1959961
AA307669	1959998
AA307697	1960187
AA307716	1960114
AA307720	1960048
AA307728	1960056
AA307746	1960074
AA307789	1960339
AA307814	1960141
AA307849	1960198
AA307857	1960206
AA307908	1960236
AA307941	1960290
AA308051	1960430
AA308063	1960392
AA308091	1960440
AA308207	1960536
AA308237	1960566
AA308269	1960748
AA308273	1960672
AA308316	1960645
AA308332	1960681
AA308486	1960835
AA308533	1960861
AA308574	1960922
AA308578	1960926
AA308812	1961305
AA308942	1961485
AA308978	1961326
AA309002	1961399
AA309127	1961452
AA309445	1961986
AA309749	1962098
AA309812	1962141
AA309832	1962325
AA309909	1962258
AA310057	1962386
AA310142	1962470
AA310163	1962511
AA310173	1962737
AA310181	1962579
AA310201	1962528
AA310292	1962620
AA310441	1962769
AA310460	1962788
AA310469	1962797
AA310561	1962887
AA310591	1962938
AA310609	1962988
AA310637	1962964
AA310663	1963155
AA310739	1963088
AA310807	1963135
AA310928	1963472
AA310978	1963326



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA311028	1963355
AA311044	1963371
AA311048	1963375
AA311125	1963483
AA311227	1963627
AA311466	1963792
AA311505	1964050
AA311639	1963968
AA311677	1964005
AA311772	1964099
AA311819	1964219
AA311860	1964189
AA311896	1964546
AA311905	1964306
AA311978	1964472
AA312025	1964354
AA312059	1964429
AA312076	1964403
AA312078	1964405
AA312177	1964506
AA312242	1964580
AA312406	1964734
AA312444	1964952
AA312448	1964956
AA312495	1964824
AA312503	1964832
AA312591	1964970
AA312605	1964944
AA312652	1965001
AA312669	1965018
AA312689	1965038
AA312756	1965084
AA312864	1965212
AA312962	1965352
AA312968	1965595
AA313057	1965385
AA313164	1965492
AA313170	1965498
AA313200	1965559
AA313208	1965669
AA313209	1965670
AA313223	1965552
AA313244	1965573
AA313369	1965909
AA313418	1965767
AA313468	1965797
AA313534	1965864
AA313549	1965879
AA313647	1965977
AA313653	1965983
AA313684	1966083
AA313692	1966021
AA313693	1966022
AA313708	1966037
AA313778	1966107
AA313779	1966108
AA313828	1966388

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA313837	1966237
AA313922	1966472
AA313933	1966262
AA313979	1966328
AA313996	1966557
AA314022	1966351
AA314028	1966357
AA314061	1966410
AA314127	1966456
AA314146	1966495
AA314161	1966560
AA314181	1966510
AA314188	1966517
AA314202	1966531
AA314203	1966532
AA314241	1966642
AA314350	1966679
AA314355	1966875
AA314391	1966740
AA314465	1966814
AA314473	1966842
AA314599	1966927
AA314659	1966987
AA314673	1967001
AA314748	1967077
AA314757	1967086
AA314804	1967203
AA314810	1967209
AA314847	1967176
AA314862	1967191
AA314872	1967221
AA314882	1967452
AA314893	1967293
AA314907	1967236
AA314920	1967249
AA314941	1967270
AA314961	1967379
AA315016	1967346
AA315049	1967529
AA315069	1967408
AA315072	1967411
AA315095	1967434
AA315118	1967597
AA315172	1967501
AA315188	1967537
AA315189	1967538
AA315215	1967614
AA315259	1967588
AA315311	1967640
AA315321	1967650
AA315331	1967660
AA315406	1967734
AA315416	1967775
AA315441	1967920
AA315444	1967923
AA315460	1967789
AA315497	1967826

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA315510	1967359
AA315555	1968084
AA315582	1967911
AA315621	1968011
AA315639	1968107
AA315713	1968047
AA315762	1968111
AA315730	1968119
AA315805	1968144
AA315838	1968187
AA315896	1968224
AA315943	1968272
AA315950	1968279
AA315968	1968297
AA315993	1968342
AA316059	1968388
AA316110	1968439
AA316159	1968508
AA316131	1968562
AA316199	1968528
AA316207	1968536
AA316217	1968546
AA316322	1968671
AA316411	1968891
AA316423	1968973
AA316627	1968955
AA316632	1968960
AA316649	1969037
AA316721	1969070
AA316723	1969072
AA316788	1969117
AA316962	1969310
AA317040	1969368
AA317068	1969547
AA317038	1969426
AA317096	1969434
AA317310	1969721
AA317455	1969303
AA317477	1969878
AA317496	1969823
AA317497	1969824
AA317659	1969985
AA317662	1969988
AA317855	1970181
AA317937	1970263
AA317942	1970444
AA317952	1970300
AA317956	1970304
AA317976	1970541
AA318009	1970377
AA318100	1970457
AA318260	1970588
AA318272	1970600
AA318284	1970633
AA318422	1970750
AA318544	1971106
AA318712	1971091

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA318745	1971189
AA313969	1971371
AA319070	1971398
AA319139	1971616
AA319538	1971886
AA319601	1972034
AA319870	1972218
AA320004	1972351
AA320034	1972402
AA320114	1972463
AA320603	1972952
AA320611	1973011
AA320701	1973180
AA320723	1973051
AA321222	1973590
AA321319	1973646
AA321703	1974040
AA321706	1974043
AA322115	1974581
AA322246	1974573
AA322352	1974926
AA322540	1974866
AA322728	1975054
AA322901	1975227
AA322922	1975248
AA323143	1975544
AA323181	1975506
AA323813	1976204
AA324251	1976494
AA324252	1976495
AA324411	1976902
AA324478	1976744
AA324683	1976929
AA324705	1976951
AA324826	1977091
AA324831	1977237
AA325077	1977575
AA325108	1977363
AA325145	1977400
AA325214	1977458
AA325220	1977464
AA325221	1977465
AA325580	1977823
AA325594	1978084
AA325658	1977901
AA325789	1978032
AA325826	1978069
AA326165	1978408
AA326242	1978486
AA326251	1978517
AA326306	1978551
AA326359	1978849
AA326752	1979007
AA326793	1979059
AA326833	1979089
AA326895	1979141
AA327011	1979258

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA327105	1979372
AA327228	1979534
AA327469	1979715
AA327546	1979791
AA327611	1979876
AA328061	1980305
AA328366	1980942
AA328446	1980711
AA328770	1981035
AA329110	1981374
AA329242	1981486
AA329553	1982040
AA329562	1981879
AA329658	1981900
AA329770	1982013
AA329937	1982190
AA330090	1982332
AA330123	1982365
AA330234	1982562
AA330784	1983026
AA330883	1983125
AA331359	1983602
AA331859	1984101
AA331876	1984118
AA332083	1984346
AA332139	1984392
AA332202	1984444
AA332551	1984804
AA332556	1984809
AA332593	1985086
AA332667	1984931
AA332716	1984959
AA332737	1984980
AA333090	1985397
AA333300	1985574
AA333307	1985550
AA333358	1985601
AA333526	1985779
AA333765	1986234
AA334344	1986660
AA334403	1986667
AA334452	1986696
AA334457	1986701
AA334511	1986795
AA334710	1986964
AA334735	1986989
AA334754	1987018
AA335273	1987516
AA335356	1987600
AA335563	1987826
AA335699	1987940
AA336081	1988391
AA336197	1988435
AA336387	1988636
AA336411	1988720
AA336586	1988824
AA336621	1988859

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA336683	1988922
AA336740	1989131
AA336798	1989037
AA337114	1989351
AA337835	1990075
AA338215	1990494
AA338257	1990535
AA338836	1991074
AA339065	1991313
AA339151	1991504
AA339735	1991972
AA339960	1992227
AA340095	1992333
AA340608	1992866
AA340632	1992945
AA340634	1992947
AA340635	1992948
AA340654	1992891
AA340719	1993029
AA340927	1993166
AA341690	1993947
AA341987	1994222
AA342231	1994467
AA342701	1994938
AA342832	1995069
AA342969	1995205
AA343168	1995489
AA343532	1995771
AA344067	1996336
AA344131	1996389
AA344133	1996391
AA344376	1996635
AA344393	1996703
AA344600	1996836
AA344625	1996882
AA344743	1996980
AA345027	1997265
AA345139	1997447
AA345189	1997424
AA345558	1997806
AA345624	1997892
AA345762	1998174
AA345876	1998186
AA345904	1998142
AA345906	1998144
AA345925	1998163
AA346253	1998490
AA346504	1998761
AA346600	1998930
AA346844	1999101
AA346918	1999155
AA347085	1999331
AA347236	1999472
AA347293	1999530
AA347340	1999577
AA347390	1999626
AA347436	1999693

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA347577	1999815
AA347839	2000124
AA348116	2000596
AA348669	2000938
AA348734	2000971
AA348878	2001164
AA349118	2001393
AA349192	2001448
AA349223	2001460
AA349232	2001469
AA349464	2001700
AA349541	2001780
AA349865	2002235
AA350206	2002505
AA350228	2002547
AA350661	2002999
AA351201	2003320
AA351297	2003616
AA351443	2003743
AA351504	2003896
AA351741	2004100
AA351799	2004115
AA352062	2004402
AA352131	2004471
AA352179	2004489
AA352755	2005084
AA352926	2005246
AA352938	2005278
AA353655	2005971
AA353766	2006176
AA354196	2006315
AA354245	2006585
AA354341	2006711
AA354376	2006696
AA354391	2006895
AA354420	2006760
AA354527	2006846
AA354730	2007049
AA354742	2007082
AA354872	2007306
AA354915	2007473
AA355003	2007559
AA355036	2007354
AA355119	2007436
AA355196	2007526
AA355264	2007802
AA355308	2007638
AA355351	2007671
AA355363	2007693
AA355451	2007812
AA355553	2007872
AA355890	2008229
AA355956	2008274
AA356069	2008479
AA356436	2008733
AA356682	2009070
AA357069	2009398

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA357077	2009396
AA357574	2009894
AA357593	2009913
AA357811	2010130
AA358169	2010487
AA358369	2010915
AA358450	2010995
AA358790	2011108
AA359003	2011321
AA359284	2011697
AA359418	2011757
AA359514	2011852
AA359763	2012080
AA359832	2012183
AA359838	2012157
AA360190	2012729
AA360310	2012628
AA360977	2013297
AA361042	2013362
AA361225	2013543
AA361403	2013742
AA361618	2013939
AA361640	2013961
AA361997	2014318
AA362731	2015102
AA362778	2015169
AA362825	2015144
AA362826	2015145
AA363019	2015357
AA363049	2015367
AA363142	2015460
AA363481	2015801
AA364171	2016510
AA364190	2016749
AA364261	2016600
AA364498	2016817
AA364656	2016973
AA364667	2017006
AA364707	2017078
AA364844	2017182
AA364882	2017199
AA364913	2017252
AA365150	2017466
AA365229	2017545
AA365620	2017940
AA365883	2018201
AA366269	2018588
AA366415	2018765
AA366518	2018846
AA366865	2019235
AA366876	2019194
AA366995	2019354
AA367471	2019789
AA367581	2019974
AA367948	2020265
AA368520	2020859
AA368792	2021110



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA368810	2021123
AA369521	2022146
AA369660	2021999
AA369736	2022106
AA369804	2022124
AA370110	2022426
AA370116	2022432
AA370122	2022438
AA370222	2022539
AA370337	2022718
AA370352	2022901
AA370501	2022914
AA370507	2022920
AA370548	2022868
AA370620	2022960
AA370976	2023294
AA371017	2023335
AA371157	2023496
AA371205	2023523
AA371265	2023659
AA371483	2023801
AA371613	2023933
AA371626	2023946
AA371964	2024282
AA372171	2024714
AA372911	2025251
AA373079	2025419
AA373289	2025894
AA373314	2025633
AA373628	2025948
AA373756	2026076
AA374020	2026340
AA374073	2026413
AA374198	2026517
AA374222	2026561
AA374376	2026715
AA374561	2026952
AA374718	2027263
AA374766	2027086
AA374814	2027195
AA375135	2027455
AA375164	2027524
AA375298	2027628
AA375312	2027642
AA375454	2027845
AA375483	2027803
AA375531	2028085
AA375853	2028408
AA375927	2028266
AA375988	2028306
AA376034	2028354
AA376123	2028443
AA376277	2028648
AA376292	2028612
AA376424	2028814
AA376668	2029214
AA376847	2029164

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA376870	2029187
AA377218	2029535
AA377796	2030114
AA378059	2030398
AA378226	2030606
AA378508	2030828
AA378589	2030909
AA378933	2031252
AA379015	2031333
AA379370	2031708
AA379448	2031766
AA379449	2031788
AA380769	2033159
AA381480	2033891
AA382481	2035042
AA383011	2035328
AA383100	2035481
AA383420	2035800
AA384125	2036454
AA384272	2036591
AA384322	2036641
AA384529	2036879
AA384756	2037169
AA384987	2037305
AA385204	2037521
AA385388	2037706
AA385449	2037766
AA385573	2037892
AA386056	2038414
AA386087	2038424
AA386267	2038603
AA386326	2038728
AA393061	2046224
AA393080	2046022
AA393259	2046359
AA393313	2046281
AA393336	2046510
AA393408	2046429
AA393480	2046646
AA393485	2046453
AA393650	2046620
AA393699	2046668
AA393816	2046783
AA393870	2046875
AA393886	2046855
AA393906	2047017
AA394176	2047163
AA394298	2047293
AA394299	2047294
AA394302	2047297
AA394311	2046088
AA397448	2050489
AA397452	2050493
AA397460	2050501
AA397702	2050804
AA397802	2051010
AA397813	2051021

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA397832	2050599
AA397953	2051098
AA398214	2051323
AA398218	2051345
AA398247	2051356
AA398256	2051365
AA398262	2051371
AA398267	2051376
AA398321	2051430
AA398348	2051457
AA398355	2051464
AA398384	2051556
AA398406	2051515
AA398463	2051573
AA398521	2051694
AA398619	2051728
AA398674	2051787
AA398686	2051799
AA398732	2051854
AA398757	2051916
AA398922	2051959
AA398929	2051966
AA398949	2052886
AA399024	2052823
AA399070	2052808
AA399074	2052829
AA399133	2052871
AA399177	2052913
AA399198	2052934
AA399218	2052971
AA399223	2053160
AA399238	2052973
AA399239	2052974
AA399245	2052980
AA399264	2052999
AA399265	2053000
AA399269	2053004
AA399275	2053010
AA399281	2053016
AA399326	2053063
AA399393	2053138
AA399433	2053246
AA399606	2052628
AA399632	2052646
AA399633	2052647
AA399637	2052651
AA400002	2053743
AA400010	2053751
AA400074	2053877
AA400128	2053930
AA400213	2054084
AA400214	2054085
AA400234	2054248
AA400247	2054313
AA400273	2054153
AA400279	2054159
AA400281	2054161

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Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA400296	2054176
AA400317	2054393
AA400329	2054254
AA400362	2054234
AA400385	2054390
AA400389	2054322
AA400418	2054289
AA400457	2054593
AA400482	2054353
AA400527	2054538
AA400596	2054527
AA400658	2054547
AA400692	2054563
AA400696	2054567
AA400732	2054620
AA401003	2054875
AA401111	2054986
AA401137	2055027
AA401206	2055159
AA401208	2055161
AA401237	2055126
AA401285	2055179
AA401339	2053564
AA401342	2053758
AA401378	2053586
AA401380	2053588
AA401409	2053634
AA401434	2053642
AA401436	2053644
AA401441	2053649
AA401457	2053665
AA401469	2053677
AA401470	2053765
AA401472	2053767
AA401480	2053886
AA401482	2053888
AA401501	2053779
AA401520	2053798
AA401521	2053799
AA401603	2054018
AA401695	2057179
AA401784	2057268
AA401802	2057286
AA401809	2055845
AA401826	2055915
AA401957	2055959
AA401972	2056031
AA402000	2056025
AA402010	2056851
AA402095	2056078
AA402115	2056106
AA402238	2056167
AA402330	2056243
AA402352	2056264
AA402408	2056896
AA402500	2056325
AA402721	2056477

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA402760	2056926
AA402792	2056545
AA402874	2056629
AA402915	2056651
AA402965	2056745
AA403051	2056800
AA403072	2055616
AA403109	2055679
AA403120	2055638
AA403121	2055639
AA403188	2055704
AA403235	2055760
AA403322	2056823
AA404231	2058973
AA404269	2058993
AA404290	2059014
AA404293	2059017
AA404338	2059063
AA404356	2059081
AA404376	2059110
AA404444	2059186
AA404486	2059229
AA404535	2059268
AA404615	2058827
AA404642	2058939
AA404646	2058943
AA404669	2058907
AA404722	2058925
AA405068	2063427
AA405181	2063669
AA405532	2063043
AA405533	2063044
AA405535	2063046
AA405543	2063054
AA405569	2063063
AA405597	2063108
AA405640	2063132
AA405663	2063330
AA405758	2063758
AA405769	2063875
AA405800	2063783
AA405809	2063792
AA405892	2063893
AA405929	2063913
AA405984	2064090
AA406019	2064002
AA406036	2064037
AA406040	2064068
AA406059	2064042
AA406061	2064044
AA406069	2064052
AA406070	2064053
AA406083	2064066
AA406115	2064231
AA406122	2064166
AA406168	2064149
AA406185	2064211

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA406191	2064217
AA406213	2064194
AA406220	2064201
AA406226	2064207
AA406301	2064285
AA406320	2064321
AA406402	2064403
AA406404	2064405
AA406475	2064476
AA406478	2064584
AA406505	2064488
AA406551	2064544
AA406565	2064558
AA406594	2064604
AA410434	2069540
AA410437	2069543
AA410480	2069648
AA410491	2069597
AA410517	2069623
AA410580	2069686
AA410640	2069745
AA410700	2069805
AA410965	2070260
AA410968	2070127
AA411201	2068819
AA411384	2068916
AA411387	2068919
AA411585	2069118
AA411607	2068751
AA411668	2069331
AA411682	2069345
AA411686	2069349
AA411736	2069397
AA412046	2070760
AA412049	2070763
AA412053	2070642
AA412229	2070799
AA412247	2070817
AA412250	2070820
AA412302	2070873
AA412403	2070991
AA412417	2071023
AA412435	2071005
AA412446	2071050
AA412470	2071058
AA412477	2071065
AA412485	2071100
AA412499	2071069
AA412500	2071070
AA412501	2071071
AA412512	2071082
AA412643	2071222
AA416543	2077495
AA416627	2077700
AA416664	2077598
AA416724	2077659
AA416736	2077671

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA416759	2077713
AA416767	2077721
AA416781	2077735
AA416782	2077736
AA416833	2077792
AA416843	2077802
AA416970	2077069
AA417012	2077093
AA417017	2077098
AA417031	2077130
AA417097	2077178
AA417211	2077337
AA417246	2077345
AA417250	2077349
AA417275	2077356
AA417280	2077361
AA417288	2077369
AA417324	2077423
AA417344	2077426
AA417355	2077437
AA417643	2079462
AA417713	2079550
AA417761	2079562
AA417792	2079602
AA417805	2079589
AA417842	2079643
AA417876	2079722
AA417895	2079714
AA417904	2079704
AA417911	2079730
AA417915	2079734
AA417920	2079739
AA417921	2079740
AA418000	2079819
AA418004	2079823
AA418028	2079857
AA418061	2079935
AA418080	2079881
AA418177	2079987
AA418383	2080230
AA418403	2080212
AA418414	2080223
AA418418	2080237
AA418473	2080273
AA418477	2080277
AA418545	2080345
AA418557	2080358
AA418564	2080365
AA418628	2080438
AA418670	2080489
AA418681	2080518
AA418685	2080522
AA418719	2080502
AA418723	2080529
AA418744	2080636
AA418748	2080640
AA418755	2080556

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA418770	2080571
AA418796	2080606
AA418821	2080622
AA418824	2080625
AA418828	2080629
AA418852	2080671
AA418903	2080722
AA418918	2080747
AA418943	2080744
AA418988	2080807
AA419C11	2078799
AA419177	2078924
AA419263	2078976
AA419486	2079222
AA419554	2079282
AA419612	2079339
AA420435	2094332
AA420462	2094340
AA420523	2094420
AA420524	2094421
AA420563	2094460
AA420571	2094468
AA420625	2094503
AA420633	2094511
AA420645	2094561
AA420647	2094563
AA420680	2094649
AA420690	2094569
AA420705	2094611
AA420721	2094600
AA420758	2094637
AA420800	2094706
AA420825	2094722
AA420826	2094723
AA420845	2094278
AA420852	2094285
AA420989	2099822
AA420992	2099825
AA420993	2099826
AA421001	2099834
AA421021	2099854
AA421047	2099862
AA421054	2099869
AA421073	2099888
AA421112	2099937
AA421170	2100125
AA421171	2100126
AA421213	2100038
AA421230	2100072
AA421256	2100081
AA421269	2100094
AA421270	2100095
AA421271	2100096
AA421273	2100098
AA421274	2100099
AA421275	2100100
AA421276	2100101



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA421284	2100109
AA421389	2100275
AA421455	2100342
AA421510	2100352
AA421545	2100370
AA421562	2100387
AA421682	2100499
AA421769	2100586
AA421795	2100645
AA421850	2100809
AA422007	2100884
AA422060	2100893
AA422139	2101007
AA422173	2101024
AA423801	2102771
AA423943	2102913
AA423957	2102927
AA424045	2103006
AA424109	2103079
AA424175	2103137
AA424202	2103207
AA424243	2103195
AA424344	2103314
AA424428	2103389
AA424456	2103444
AA424466	2103490
AA424535	2103505
AA424543	2103513
AA424561	2103531
AA424562	2103532
AA424648	2103645
AA424655	2103608
AA424658	2103611
AA424706	2102756
AA424790	2106958
AA424849	2106972
AA424900	2107005
AA424905	2107010
AA424920	2107443
AA424950	2107038
AA425062	2107195
AA425158	2107469
AA425205	2105997
AA425212	2106120
AA425214	2106122
AA425218	2106126
AA425298	2106108
AA425299	2106109
AA425302	2106058
AA425305	2106061
AA425307	2106063
AA425319	2106093
AA425382	2106165
AA425389	2106172
AA425394	2106195
AA425404	2106160
AA425407	2106163

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA425414	2106232
AA425436	2106201
AA425442	2106207
AA425450	2106189
AA425460	2106216
AA425492	2106249
AA425509	2106328
AA425526	2106267
AA425534	2106292
AA425583	2106339
AA425613	2106369
AA425619	2106375
AA425650	2106462
AA425664	2106439
AA425692	2106412
AA425743	2106473
AA425749	2106451
AA425755	2106457
AA425773	2106493
AA425826	2107646
AA425900	2107823
AA425908	2107831
AA425947	2107735
AA426025	2106558
AA426030	2106563
AA426038	2106526
AA426067	2106555
AA426092	2106581
AA426110	2106625
AA426113	2106585
AA426209	2107568
AA426212	2107615
AA426227	2107760
AA426229	2107570
AA426235	2107576
AA426341	2106631
AA426351	2106641
AA426380	2106652
AA426391	2106753
AA426561	2106816
AA426578	2106806
AA426629	2106857
AA427395	2112257
AA427400	2112167
AA427401	2112168
AA427404	2112171
AA427459	2111321
AA427471	2111333
AA427477	2111339
AA427528	2112268
AA427561	2111429
AA427570	2111422
AA427596	2111447
AA427719	2112179
AA427737	2111578
AA427740	2111581
AA427866	2112185

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA427895	2111675
AA427899	2111679
AA427927	2111689
AA427947	2111692
AA427978	2112197
AA428008	2111736
AA428014	2111742
AA428084	2111805
AA428096	2111773
AA428143	2112093
AA428186	2111836
AA428196	2112164
AA428216	2112108
AA428329	2110194
AA428341	2110206
AA428415	2112229
AA428514	2112511
AA428603	2112796
AA428659	2112807
AA429014	2110564
AA429034	2110576
AA429036	2110573
AA429173	2110699
AA429190	2110741
AA429293	2110817
AA429297	2110821
AA429336	2110860
AA429381	2111934
AA429422	2111942
AA429457	2112416
AA429474	2112433
AA429493	2112612
AA429602	2112703
AA429721	2112921
AA429904	2113076
AA429912	2113084
AA430002	2113194
AA430032	2113206
AA430042	2113216
AA430052	2113226
AA430110	2113284
AA430160	2113397
AA430202	2113375
AA430205	2113378
AA430242	2113443
AA430271	2113481
AA430304	2113514
AA430313	2113523
AA430351	2110926
AA430367	2110942
AA430381	2110956
AA430382	2110957
AA430400	2110974
AA430410	2111112
AA430478	2111035
AA430506	2111096
AA430545	2111120

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA430555	2111130
AA430597	2111953
AA430615	2111188
AA430628	2112151
AA430718	2112377
AA430744	2112163
AA430752	2111978
AA430754	2111980
AA431018	2113738
AA431226	2114934
AA431401	2115109
AA431407	2115115
AA431571	2115279
AA431579	2115287
AA431664	2115372
AA431677	2115385
AA431721	2115429
AA431741	2115449
AA431750	2115458
AA431753	2115461
AA431772	2115480
AA431773	2115481
AA431836	2115544
AA431868	2115576
AA431887	2115595
AA431964	2115672
AA431975	2115683
AA431988	2115696
AA432030	2115738
AA432049	2115757
AA432058	2115766
AA432064	2115772
AA432075	2115783
AA432085	2115793
AA432096	2115804
AA432103	2115811
AA432124	2114512
AA432134	2114522
AA432141	2114529
AA432144	2114532
AA432203	2114591
AA432253	2114641
AA432264	2114652
AA432270	2114658
AA432278	2114666
AA432312	2114695
AA433848	2138762
AA433869	2138783
AA433877	2138791
AA433880	2138794
AA433885	2138799
AA433910	2138824
AA433988	2138902
AA434028	2138940
AA434092	2139005
AA434117	2139031
AA434286	2139200

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA434360	2139274
AA434362	2139276
AA434388	2139302
AA434403	2139317
AA434404	2139318
AA434454	2139368
AA434487	2139401
AA434502	2139416
AA435565	2140479
AA435877	2140791
AA435887	2140801
AA435894	2140808
AA435988	2140902
AA436008	2140922
AA436031	2140945
AA436097	2141011
AA436125	2141039
AA436142	2141056
AA436152	2141066
AA436187	2141101
AA436197	2141111
AA436317	2141231
AA436327	2141241
AA436377	2141291
AA436394	2141308
AA436395	2141309
AA436472	2141386
AA436479	2141393
AA436546	2141460
AA436573	2141487
AA436595	2141509
AA436652	2141566
AA436730	2141544
AA436762	2141676
AA436765	2141679
AA436769	2141683
AA437093	2142007
AA437099	2142013
AA437107	2142021
AA437126	2142040
AA437142	2142056
AA437212	2142126
AA437224	2142138
AA437226	2142140
AA437241	2142155
AA437245	2142159
AA437277	2142191
AA437304	2142218
AA441885	2153763
AA441918	2153796
AA441933	2153811
AA441959	2153837
AA442017	2153895
AA442095	2153973
AA442145	2154023
AA442184	2154062
AA442287	2154165

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA442301	2154179
AA442352	2154230
AA442372	2154250
AA442415	2154293
AA442479	2154357
AA442517	2154395
AA442615	2154493
AA442687	2154565
AA442829	2155504
AA442853	2155528
AA442976	2155651
AA442991	2155666
AA443004	2155679
AA443024	2155699
AA443082	2155757
AA443090	2155765
AA443094	2155769
AA443116	2155791
AA443140	2155815
AA443147	2155822
AA443152	2155827
AA443154	2155829
AA443177	2155852
AA443184	2155859
AA443242	2155917
AA443286	2155961
AA443300	2155975
AA443357	2156032
AA443447	2156122
AA443463	2156138
AA443602	2156277
AA443624	2156299
AA443638	2156313
AA443649	2156324
AA443659	2156334
AA443688	2156363
AA443698	2156373
AA443706	2156381
AA443750	2156425
AA443757	2156432
AA443790	2156465
AA443806	2156481
AA443823	2156498
AA443829	2156504
AA443832	2156507
AA443834	2156509
AA443870	2156545
AA443903	2156578
AA443936	2156611
AA443938	2156613
AA443946	2156621
AA443950	2156625
AA443958	2156633
AA443966	2156641
AA443967	2156642
AA443969	2156644
AA444051	2156726

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA444072	2156747
AA444074	2156749
AA444083	2156758
AA444093	2156768
AA444111	2156786
AA444386	2157051
AA445955	2158620
AA446031	2158696
AA446071	2158736
AA446103	2158768
AA446116	2158781
AA446120	2158785
AA446149	2158814
AA446298	2158963
AA446316	2158981
AA446322	2158987
AA446366	2159031
AA446446	2159111
AA446451	2159116
AA446462	2159127
AA446479	2159144
AA446639	2159304
AA446643	2159308
AA446658	2159323
AA446690	2159355
AA446716	2159381
AA446743	2159408
AA446748	2159413
AA446759	2159424
AA446760	2159425
AA446789	2159454
AA446839	2159504
AA446864	2159509
AA446866	2159531
AA446877	2159542
AA446882	2159547
AA446885	2159550
AA446906	2159571
AA446910	2159575
AA446943	2159608
AA446958	2159623
AA447018	2159683
AA447021	2159686
AA447069	2159734
AA447079	2159744
AA447116	2159781
AA447189	2159854
AA447254	2159919
AA447322	3025408
AA447343	2161013
AA447349	2161019
AA447401	2161071
AA447433	2161103
AA447476	2161146
AA447503	2161173
AA447504	2161174
AA447514	2161184

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA447522	2161192
AA447527	2161197
AA447531	2161201
AA447547	2161217
AA447559	2161229
AA447561	2161231
AA447563	2161233
AA447574	2161244
AA447585	2161255
AA447592	2161262
AA447608	2161278
AA447662	2161332
AA447700	2161370
AA447724	2161394
AA447731	2161401
AA447740	2161410
AA447742	2161412
AA447743	2161413
AA447744	2161414
AA447751	2161421
AA447761	2161431
AA447764	2161434
AA447815	2161485
AA447885	2161555
AA447948	2161618
AA447986	2161656
AA448036	2161706
AA448118	2161788
AA448160	2161830
AA448172	2161842
AA448184	2161854
AA448186	2161856
AA448194	2161864
AA448195	2161865
AA448251	2161921
AA448257	2161927
AA448270	2161940
AA448283	2161953
AA448289	2161959
AA448390	2162060
AA448394	2162064
AA448396	2162066
AA448400	2162070
AA448402	2162072
AA448484	2162154
AA448486	2162156
AA448514	2162184
AA448526	2162196
AA448531	2162201
AA448542	2162212
AA448599	2162269
AA448614	2162284
AA448617	2162287
AA448664	2162334
AA448672	2162342
AA448676	2162346
AA448795	2162465



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA448825	2162495
AA448855	2162525
AA448882	2162552
AA448950	2162970
AA449004	2163024
AA449037	2163057
AA449048	2163068
AA449054	2163074
AA449085	2163105
AA449118	2163138
AA449120	2163140
AA449228	2162691
AA449300	2163149
AA449305	2163154
AA449345	2163194
AA449362	2163211
AA449435	2162826
AA449520	2163270
AA449544	2163294
AA449604	2163354
AA449632	2163382
AA449644	2163394
AA449649	2163399
AA449657	2163407
AA449663	2163413
AA449686	2163436
AA449745	2163495
AA449762	2163512
AA449823	2163573
AA449837	2163587
AA449889	2163639
AA449891	2163641
AA449907	2163657
AA449922	2163672
AA449940	2163690
AA450051	2163801
AA450120	2163870
AA450168	2163918
AA450205	2163955
AA450265	2164015
AA451633	2165302
AA451733	2165402
AA451807	2165476
AA451863	2165532
AA451886	2165555
AA451890	2165559
AA451988	2165657
AA452012	2165681
AA452027	2165696
AA452095	2165764
AA452113	2165782
AA452120	2165789
AA452125	2165794
AA452139	2165808
AA452177	2165846
AA452200	2165869
AA452278	2165947

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA452288	2165957
AA452352	2166021
AA452412	2166091
AA452542	2166211
AA452566	2166235
AA452578	2166247
AA452722	2166391
AA452897	2166566
AA452909	2166578
AA452920	2166589
AA452933	2166602
AA452955	2166624
AA452966	2166635
AA452999	2166668
AA453015	2166684
AA453040	2166709
AA453085	2166734
AA453105	2166774
AA453134	2166803
AA453256	2166915
AA453260	2166929
AA453261	2166930
AA453273	2166942
AA453310	2166979
AA453333	2167002
AA453345	2167014
AA453352	2167021
AA453433	2167102
AA453437	2167106
AA453441	2167110
AA453445	2167114
AA453465	2167134
AA453466	2167135
AA453478	2167147
AA453486	2167155
AA453487	2167156
AA453518	2167187
AA453526	2167195
AA453531	2167200
AA453550	2167219
AA453555	2167224
AA453562	2167231
AA453585	2167254
AA453609	2167278
AA453612	2167281
AA453616	2167285
AA453651	2167320
AA453679	2167348
AA453713	2167382
AA453714	2167383
AA453719	2167388
AA453769	2167438
AA453783	2167452
AA453784	2167453
AA453787	2167456
AA453795	2167464
AA453802	2167471

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA453832	2167501
AA453849	2167518
AA453863	2167532
AA453900	2167569
AA453924	2167593
AA453926	2167595
AA453993	2167662
AA453996	2167665
AA453997	2167666
AA454018	2167687
AA454027	2167696
AA454065	2167734
AA454080	2167749
AA454082	2167751
AA454085	2167754
AA454098	2167767
AA454149	2167818
AA454155	2167824
AA454165	2167834
AA454170	2167839
AA454186	2167855
AA454187	2167856
AA454208	2167877
AA454215	2167884
AA454218	2167887
AA454222	2167891
AA454554	2177330
AA454557	2177333
AA454562	2177338
AA454570	2177346
AA454585	2177361
AA454597	2177373
AA454634	2177410
AA454652	2177428
AA454654	2177430
AA454702	2177478
AA454756	2177532
AA454844	2177620
AA454862	2177638
AA454912	2177688
AA454921	2177697
AA454925	2177701
AA454928	2177704
AA454947	2177723
AA454949	2177725
AA454962	2177738
AA454963	2177739
AA454986	2177762
AA455020	2177796
AA455042	2177818
AA455056	2177832
AA455062	2177838
AA455087	2177863
AA455096	2177872
AA455126	2177902
AA455130	2177906
AA455151	2177927

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA455164	2177940
AA455197	2177973
AA455227	2178003
AA455235	2178011
AA455237	2178013
AA455242	2178018
AA455275	2178051
AA455299	2178075
AA455358	2178134
AA455369	2178145
AA455475	2178251
AA455482	2178258
AA455497	2178273
AA455519	2178295
AA455521	2178297
AA455565	2178341
AA455652	2178428
AA455654	2178430
AA455659	2178435
AA455668	2178444
AA455689	2178465
AA455714	2178490
AA455786	2178562
AA455825	2178601
AA455894	2178670
AA455904	2178680
AA455917	2178693
AA455931	2178707
AA455938	2178714
AA455940	2178716
AA455980	2178756
AA455988	2178764
AA456008	2178784
AA456035	2178811
AA456078	2178854
AA456130	2179340
AA456135	2179345
AA456143	2179353
AA456148	2179358
AA456246	2179456
AA456271	2179481
AA456298	2179508
AA456299	2179509
AA456321	2179531
AA456331	2178907
AA456344	2178920
AA456372	2178948
AA456377	2178953
AA456390	2178966
AA456413	2178989
AA456419	2178995
AA456569	2179145
AA456611	2179187
AA456616	2179192
AA456628	2179204
AA456695	2179271
AA456717	2179293

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA456721	2179297
AA456737	2179313
AA456818	2179538
AA456821	2179541
AA456827	2179547
AA456833	2179553
AA456886	2179606
AA456931	2179651
AA456951	2179671
AA456968	2179683
AA456975	2179695
AA457021	2179741
AA457041	2179761
AA457082	2179802
AA457092	2179812
AA457138	2179858
AA457172	2179892
AA457235	2179955
AA457365	2180085
AA457474	2180194
AA457517	2180237
AA457528	2180248
AA457529	2180249
AA457576	2180296
AA457675	2180395
AA457681	2180401
AA457696	2180416
AA457717	2180437
AA457720	2180440
AA457725	2180445
AA457737	2180457
AA457767	2180487
AA458487	2183394
AA458491	2183398
AA458514	2183421
AA458516	2183423
AA458528	2183435
AA458549	2183456
AA458551	2183458
AA458578	2183485
AA458646	2183553
AA458747	2183654
AA458761	2183668
AA458770	2183677
AA458804	2183711
AA458827	2183734
AA458921	2183828
AA458943	2183850
AA458959	2183866
AA459008	2183915
AA459100	2184007
AA459106	2184013
AA459110	2184017
AA459123	2184030
AA459167	2184074
AA459197	2184104
AA459208	2184115

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Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA459210	2184117
AA459244	2184151
AA459292	2184199
AA459293	2184200
AA459318	2184225
AA459321	2184228
AA459383	2184290
AA459400	2184307
AA459455	2184362
AA459472	2184379
AA459476	2184383
AA459517	2184424
AA459519	2184426
AA459528	2184435
AA459617	2184524
AA459632	2184539
AA459651	2184558
AA459652	2184559
AA459679	2184586
AA459692	2184599
AA459702	2184609
AA459750	2184657
AA459753	2184660
AA459761	2184668
AA459765	2184672
AA459831	2184738
AA459857	2184764
AA459869	2184776
AA459871	2184778
AA459909	2183355
AA459917	2184801
AA459941	2184825
AA459945	2184829
AA459980	2184864
AA459983	2184867
AA460115	2185500
AA460120	2185505
AA460251	2185067
AA460274	2185090
AA460282	2185098
AA460285	2185101
AA460286	2185102
AA460289	2185105
AA460291	2185107
AA460299	2185115
AA460310	2185126
AA460313	2185129
AA460328	2185144
AA460346	2185559
AA460353	2185566
AA460422	2185168
AA460440	2185186
AA460463	2185209
AA460511	2185631
AA460521	2185641
AA460530	2185650
AA460557	2185677

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA460571	2185691
AA460587	2185707
AA460649	2185769
AA460675	2185795
AA460685	2185805
AA460702	2185822
AA460719	2185839
AA460729	2185849
AA460755	2185875
AA460777	2185897
AA460816	2185936
AA460827	2185947
AA460849	2185969
AA460930	2186050
AA460952	2186072
AA460961	2186081
AA460963	2186083
AA460967	2186087
AA460969	2186089
AA460986	2186106
AA461015	2186135
AA461082	2186202
AA461086	2186206
AA461092	2186212
AA461119	2186239
AA461128	2186248
AA461174	2186294
AA461222	2186342
AA461260	2186380
AA461307	2186427
AA461311	2186431
AA461320	2186440
AA461467	2185331
AA461506	2185370
AA461507	2185371
AA461508	2185372
AA461513	2185377
AA461522	2185386
AA461548	2185412
AA461605	2185469
AA463188	2188072
AA463198	2188082
AA463200	2188084
AA463225	2188109
AA463248	2188132
AA463444	2188328
AA463445	2188329
AA463449	2188333
AA463463	2188347
AA463469	2188353
AA463483	2188367
AA463500	2188384
AA463533	2188417
AA463627	2188511
AA463635	2188519
AA463643	2188527
AA463761	2188645

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA463822	2188706
AA463924	2188808
AA463932	2188816
AA463982	2188866
AA464068	2188952
AA464133	2189017
AA464141	2189025
AA464143	2189027
AA464160	2189044
AA464163	2189047
AA464338	2189222
AA464522	2189406
AA464531	2189415
AA464541	2189425
AA464568	2189452
AA464580	2189464
AA464598	2189482
AA464600	2189484
AA464615	2189499
AA464617	2189501
AA464623	2189507
AA464689	2189573
AA464700	2189584
AA464755	2189639
AA464763	2189647
AA464861	2189745
AA464880	2189764
AA464935	2189819
AA464941	2189825
AA464952	2189836
AA464979	2189863
AA464995	2189879
AA465090	2191257
AA465116	2191283
AA465148	2191315
AA465166	2191333
AA465168	2191335
AA465180	2191347
AA465193	2191360
AA465194	2191361
AA465223	2191390
AA465238	2191405
AA465258	2191425
AA465293	2191460
AA465338	2191505
AA465340	2191507
AA465353	2191520
AA465387	2191554
AA465424	2191591
AA465450	2191617
AA465494	2191661
AA465495	2191662
AA465509	2191676
AA465593	2191760
AA465598	2191765
AA465614	2191781
AA465692	2191859



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA465697	2191864
AA465723	2191245
AA467748	2194282
AA467750	2194284
AA467761	2194295
AA467864	2194398
AA467869	2194403
AA467974	2194508
AA468151	2194685
AA468167	2194701
AA468335	2194869
AA468404	2194938
AA468411	2194945
AA468504	2195038
AA468565	2195099
AA468575	2195109
AA468624	2195158
AA468760	2195294
AA468839	2195373
AA469129	2195663
AA469151	2195685
AA469199	2195733
AA469238	2195772
AA469303	2195837
AA469304	2195838
AA469345	2195879
AA469348	2195882
AA469406	2195940
AA469432	2194227
AA469922	2197231
AA469926	2197235
AA469939	2197248
AA469966	2197275
AA469979	2197288
AA470051	2197360
AA470073	2197382
AA470079	2197388
AA470575	2197884
AA470602	2197911
AA470662	2197971
AA470690	2197999
AA470829	2198138
AA470833	2198142
AA471025	2198334
AA471056	2198365
AA471070	2198379
AA476207	2204418
AA476234	2204445
AA476240	2204451
AA476257	2204468
AA476263	2204474
AA476360	2204571
AA476392	2204603
AA476487	2204698
AA476502	2204713
AA476509	2204720
AA476524	2204735

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA476543	2204754
AA476576	2204787
AA476586	2204797
AA476648	2204859
AA476679	2204890
AA476725	2204936
AA476756	2204967
AA476758	2204969
AA476961	2205172
AA477075	2205286
AA477173	2205857
AA477227	2205302
AA477283	2205917
AA477288	2205922
AA477397	2206031
AA477400	2206034
AA477579	2206213
AA477597	2206231
AA477683	2206317
AA477698	2206332
AA477728	2206362
AA477747	2206381
AA477803	2206437
AA477848	2206482
AA477856	2206490
AA478036	2206670
AA478066	2206700
AA478258	2206892
AA478268	2206902
AA478298	2206932
AA478415	2207049
AA478436	2207070
AA478452	2207086
AA478470	2207104
AA478479	2207113
AA478481	2207115
AA478514	2207148
AA478518	2207152
AA478522	2207156
AA478539	2207173
AA478542	2207176
AA478606	2207240
AA478627	2207261
AA478647	2207281
AA478842	2207476
AA478891	2207525
AA478931	2207565
AA478952	2207586
AA478965	2207599
AA479058	2207614
AA479100	2207656
AA479133	2207689
AA479151	2207707
AA479154	2207710
AA479167	2207723
AA479276	2207832
AA479280	2207836

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA479284	2207840
AA479287	2207843
AA479313	2207869
AA479327	2207883
AA479342	2207898
AA479351	2207907
AA479363	2207919
AA479444	2208000
AA479494	2208050
AA479496	2208054
AA479512	2208068
AA479614	2205500
AA479646	2205532
AA479689	2205575
AA479781	2205667
AA479795	2205681
AA479809	2205695
AA479860	2205746
AA479906	2204388
AA479912	2204394
AA479928	2204410
AA479962	2208113
AA479967	2208118
AA479976	2208127
AA480051	2208202
AA480124	2208275
AA480202	2208353
AA480226	2208377
AA480282	2208433
AA480420	2208571
AA480505	2208656
AA480529	2208680
AA480551	2208702
AA480820	2210372
AA480844	2210396
AA480863	2210415
AA480870	2210422
AA480906	2210458
AA481001	2210553
AA481045	2210597
AA481047	2210599
AA481052	2210604
AA481078	2210630
AA481135	2210687
AA481144	2210696
AA481152	2210704
AA481158	2210710
AA481256	2210808
AA481303	2210855
AA481316	2210868
AA481355	2210907
AA481397	2210949
AA481437	2210989
AA481438	2210990
AA481464	2211016
AA481476	2211028
AA481481	2211033

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA481491	2211043
AA481571	2211123
AA481738	2211290
AA481751	2211303
AA481754	2211306
AA481757	2211309
AA481770	2211322
AA481788	2211340
AA481806	2211358
AA481979	2209657
AA482007	2209685
AA482119	2209797
AA482127	2209805
AA482150	2209828
AA482198	2209876
AA482228	2209906
AA482285	2209963
AA482324	2210002
AA482340	2210018
AA482403	2210081
AA482430	2210108
AA482434	2210112
AA482522	2210200
AA482539	2210217
AA482654	2210332
AA482724	2211569
AA482853	2211698
AA482884	2211729
AA483008	2211853
AA483013	2211858
AA483044	2211889
AA483214	2212027
AA483289	2212102
AA483565	2212378
AA483635	2212448
AA483857	2212670
AA483887	2212700
AA484104	2212917
AA484284	2213097
AA484568	2213381
AA484711	2211505
AA484751	2214136
AA484752	2214137
AA484821	2214054
AA485018	2214237
AA485024	2214243
AA485052	2214271
AA485065	2214284
AA485102	2214321
AA485140	2214359
AA485201	2214420
AA485214	2214433
AA485216	2214435
AA485217	2214436
AA485249	2214468
AA485265	2214484
AA485303	2214522

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA485333	2214552
AA485351	2214570
AA485352	2214571
AA485357	2214576
AA485365	2214584
AA485373	2214592
AA485380	2214599
AA485427	2214646
AA485429	2214648
AA485441	2214660
AA485453	2214672
AA485467	2214686
AA485508	2214727
AA485653	2214872
AA485675	2214894
AA485676	2214895
AA485688	2214907
AA485714	2214933
AA485748	2214967
AA485749	2214968
AA485767	2214986
AA485773	2214992
AA485853	2215072
AA485861	2215080
AA485898	2215117
AA485906	2216130
AA485922	2216146
AA485928	2216152
AA485935	2216159
AA485983	2216199
AA485996	2216212
AA486041	2216257
AA486071	2216287
AA486082	2216298
AA486084	2216300
AA486145	2216361
AA486200	2216416
AA486261	2216477
AA486281	2216497
AA486288	2216504
AA486300	2216516
AA486370	2215176
AA486403	2216567
AA486412	2216576
AA486413	2216577
AA486430	2216594
AA486435	2216599
AA486444	2216608
AA486445	2216609
AA486471	2216635
AA486516	2216630
AA486533	2216697
AA486538	2216702
AA486551	2216715
AA486561	2216725
AA486619	2216783
AA486628	2216792

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA486669	2216833
AA486723	2216887
AA486741	2216905
AA486765	2216929
AA486837	2217001
AA486838	2217002
AA486862	2217026
AA486864	2217028
AA487020	2217184
AA487031	2217195
AA487046	2217210
AA487146	2217310
AA487192	2217356
AA487203	2217367
AA487206	2217370
AA487213	2217377
AA487215	2217379
AA487261	2217425
AA487382	2217546
AA487385	2217549
AA487432	2217596
AA487448	2217612
AA487457	2217621
AA487463	2217627
AA487465	2217629
AA487468	2217632
AA487503	2217667
AA487505	2217669
AA487552	2217716
AA487556	2217720
AA487560	2217724
AA487561	2217725
AA487608	2217772
AA487650	2217814
AA487674	2217838
AA487676	2217840
AA487680	2217844
AA487747	2217911
AA487754	2215185
AA487902	2215333
AA487914	2215345
AA487934	2215365
AA488014	2215445
AA488036	2215467
AA488064	2215495
AA488175	2215606
AA488227	2215658
AA488238	2215669
AA488280	2215711
AA488324	2215755
AA488367	2215798
AA488445	2215876
AA488468	2215899
AA488481	2215912
AA488567	2215998
AA488588	2216019
AA488592	2216023

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA488604	2216035
AA488626	2216057
AA488633	2216064
AA488676	2216107
AA488732	2218334
AA488744	2218346
AA488784	2218386
AA488809	2218411
AA488865	2218467
AA488892	2218494
AA488893	2218495
AA488954	2218556
AA488976	2218578
AA488979	2218581
AA488986	2218588
AA489000	2218602
AA489012	2218614
AA489016	2218618
AA489020	2218622
AA489032	2218634
AA489040	2218642
AA489073	2218675
AA489074	2218676
AA489121	2218723
AA489124	2218726
AA489160	2218762
AA489173	2218775
AA489194	2218796
AA489219	2218821
AA489247	2218849
AA489261	2218863
AA489323	2218925
AA489343	2218945
AA489410	2219012
AA489433	2219035
AA489447	2219049
AA489478	2219080
AA489498	2219100
AA489569	2219171
AA489611	2219213
AA489639	2219241
AA489647	2219249
AA489662	2219264
AA489666	2219268
AA489670	2219272
AA489681	2219283
AA489696	2219298
AA489729	2219331
AA489743	2219345
AA489752	2219354
AA489782	2220666
AA489791	2220675
AA489921	2220796
AA489965	2220840
AA490044	2220919
AA490047	2220922
AA490058	2220933

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA490213	2219395
AA490240	2219422
AA490263	2219436
AA490264	2219437
AA490390	2219563
AA490456	2219629
AA490490	2219663
AA490522	2219695
AA490561	2219734
AA490605	2219778
AA490609	2219782
AA490611	2219784
AA490635	2219808
AA490734	2219907
AA490802	2219975
AA490893	2220066
AA490910	2220083
AA490945	2220118
AA490975	2220148
AA490985	2220158
AA490987	2220160
AA491041	2220214
AA491081	2220254
AA491206	2220379
AA491227	2220400
AA491249	2220422
AA491261	2220434
AA491265	2220438
AA491272	2220445
AA491302	2220475
AA491312	2220485
AA491370	2220543
AA491866	2221428
AA491983	2221545
AA492026	2221588
AA492035	2221597
AA492038	2221600
AA492042	2221604
AA492143	2221705
AA492192	2221754
AA492219	2221781
AA492256	2221818
AA492272	2221834
AA492280	2221842
AA492390	2221952
AA492392	2221954
AA493183	2223024
AA493222	2223063
AA493331	2223172
AA493448	2223289
AA493512	2223353
AA493551	2223392
AA493742	2223583
AA493956	2223797
AA493962	2223803
AA494214	2224055
AA494295	2224082



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA494344	2224131
AA494439	2224276
AA494493	2224280
AA495759	2229080
AA495819	2229140
AA495936	2229257
AA495938	2229259
AA495962	2229283
AA496022	2229343
AA496133	2229454
AA496148	2229469
AA496149	2229470
AA496173	2229494
AA496252	2229573
AA496348	2229669
AA496349	2229670
AA496359	2229680
AA496360	2229681
AA496455	2229776
AA496544	2229865
AA496628	2229949
AA496736	2230057
AA496792	2230113
AA496796	2230117
AA496800	2230121
AA496801	2230122
AA496881	2230202
AA496887	2230208
AA496932	2230253
AA496949	2230270
AA496957	2230278
AA496988	2230309
AA496998	2230319
AA497001	2230322
AA497010	2230331
AA497034	2230355
AA497040	2230361
AA497050	2230371
AA497111	2230432
AA497118	2230439
AA497127	2230448
AA501363	2236330
AA501447	2236414
AA501739	2236706
AA501752	2236719
AA501945	2236912
AA501968	2236935
AA502178	2237145
AA502320	2237287
AA502730	2237697
AA502798	2237765
AA502799	2237766
AA502897	2237864
AA502901	2237868
AA502955	2237922
AA502979	2237946
AA503020	2237987

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA503040	2238007
AA503073	2238045
AA503096	2238063
AA503115	2238082
AA503132	2238099
AA503182	2238149
AA503215	2238182
AA503224	2238191
AA503265	2238232
AA503330	2238297
AA503611	2238578
AA503718	2238685
AA503719	2238686
AA503731	2238698
AA503930	2238897
AA503943	2238910
AA504120	2240280
AA504132	2240292
AA504134	2240294
AA504173	2240333
AA504201	2240361
AA504202	2240362
AA504238	2240398
AA504239	2240399
AA504246	2240406
AA504262	2240422
AA504265	2240425
AA504272	2240432
AA504284	2240444
AA504322	2240482
AA504334	2240494
AA504340	2240500
AA504343	2240503
AA504354	2240514
AA504490	2240650
AA504492	2240652
AA504505	2240665
AA504507	2240667
AA504514	2240674
AA504536	2240696
AA504560	2240720
AA504617	2240777
AA504622	2240782
AA504625	2240785
AA504631	2240791
AA504703	2240863
AA504728	2240888
AA504772	2240932
AA504783	2240943
AA504784	2240944
AA504834	2240994
AA504838	2240998
AA504842	2241002
AA504844	2241004
AA504845	2241005
AA504953	2241113
AA504969	2241129

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA5C5045	2241205
AA5C5051	2241211
AA5C5063	2241223
AA5C5073	2241233
AA5C5076	2241236
AA5C5082	2241242
AA5C5117	2241277
AA5C5124	2241284
AA5C5111	2241301
AA5C5150	2241310
AA5C5162	2241322
AA5C5198	2240236
AA5C5327	2241464
AA5C5400	2241537
AA5C5423	2241560
AA5C5523	2241660
AA5C5568	2241705
AA5C5594	2241731
AA5C5625	2241762
AA5C5816	2241953
AA5C5953	2242090
AA5C6099	2242236
AA5C6299	2242539
AA5C6304	2242544
AA5C6323	2242563
AA5C6419	2242659
AA5C6459	2242699
AA5C6607	2242754
AA5C6729	2242876
AA5C6923	2243362
AA5C6953	2243392
AA5C6967	2243406
AA5C7041	2243480
AA5C7065	2243504
AA5C7084	2243523
AA5C7201	2243640
AA5C7217	2243656
AA5C7306	2243745
AA5C7314	2243753
AA5C7442	2243881
AA5C7472	2243911
AA5C7505	2243944
AA5C7511	2243950
AA5C7595	2244034
AA5C7777	2244216
AA5C7791	2244230
AA5C7792	2244231
AA5C7804	2244243
AA5C7878	2244317
AA5C8507	2246010
AA5C8552	2246055
AA5C8579	2246082
AA5C8588	2246091
AA5C8804	2246307
AA5C8810	2246313
AA5C8861	2246364
AA5C8889	2245830

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA508898	2245839
AA508902	2245843
AA512974	2251397
AA512975	2251398
AA513052	2251464
AA513056	2251468
AA513177	2251589
AA513556	2251968
AA513597	2252009
AA513688	2252100
AA513940	2252361
AA514042	2252463
AA514302	2253810
AA514324	2253832
AA514474	2254074
AA514490	2254090
AA514775	2254375
AA514933	2254533
AA514938	2254538
AA514991	2254591
AA515109	2254709
AA515132	2254732
AA515143	2254743
AA515564	2255164
AA515576	2255176
AA515857	2255457
AA515908	2255508
AA516441	2255965
AA516531	2256055
AA520979	2261522
AA520999	2261542
AA521013	2261556
AA521016	2261559
AA521083	2261626
AA521108	2261651
AA521140	2261683
AA521142	2261685
AA521163	2261706
AA521213	2261756
AA521232	2261775
AA521243	2261786
AA521247	2261790
AA521292	2261835
AA521327	2261870
AA521337	2261880
AA521351	2261894
AA521384	2261927
AA521385	2261928
AA521394	2261937
AA521409	2261952
AA521411	2261954
AA521414	2261957
AA521416	2261959
AA521431	2261974
AA522473	2263185
AA522481	2263193
AA522492	2263204

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA522549	2263261
AA522552	2263264
AA522638	2263350
AA522664	2263376
AA522686	2263398
AA522746	2263458
AA522849	2263561
AA522850	2263562
AA522856	2263568
AA522867	2263579
AA522936	2263648
AA523006	2388773
AA523252	2263964
AA523354	2264066
AA523464	2264176
AA523484	2264196
AA523498	2264210
AA523503	2264215
AA523552	2264580
AA523671	2264599
AA523677	2264605
AA523708	2264636
AA523751	2264679
AA523902	2264830
AA523938	2264866
AA523982	2264910
AA524023	2264951
AA524064	2264992
AA524258	2265186
AA524285	2265213
AA524462	2265390
AA524485	2265413
AA524526	2265456
AA524651	2265579
AA524672	2265600
AA524778	2265706
AA524812	2265740
AA524893	2265821
AA525032	2265960
AA525269	2266197
AA525386	2266314
AA525419	2266347
AA525487	2264442
AA525497	2264452
AA525801	2267870
AA525958	2268027
AA525960	2268029
AA526097	2268166
AA526151	2268220
AA526187	2268256
AA526214	2268283
AA526243	2268312
AA526244	2268313
AA526283	2268352
AA526368	2268437
AA526369	2268438
AA526403	2268472

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA526430	2268499
AA526472	2268541
AA526515	2268584
AA526591	2268660
AA526834	2268903
AA526869	2268938
AA526886	2268955
AA526893	2268962
AA526894	2268963
AA527116	2269185
AA527187	2269256
AA527272	2269341
AA527326	2269395
AA527342	2269411
AA527570	2269639
AA527667	2269736
AA527730	2269799
AA527737	2269806
AA527805	2269874
AA528023	2270092
AA528104	2270173
AA528123	2270192
AA528202	2270271
AA528204	2270273
AA531044	2273750
AA531068	2273774
AA531198	2273904
AA531221	2273927
AA531227	2273933
AA531249	2273955
AA531255	2273961
AA531312	2274018
AA531386	2274092
AA531487	2274193
AA531509	2274215
AA531561	2274267
AA531563	2274269
AA531562	2274288
AA531602	2274308
AA531606	2274312
AA532377	2276631
AA532398	2276652
AA532461	2276715
AA532663	2276917
AA532852	2278428
AA532883	2276979
AA532934	2277030
AA533001	2277097
AA533057	2277153
AA533115	2277211
AA533227	2277323
AA533372	2277468
AA533386	2277482
AA533494	2277590
AA533553	2277649
AA533575	2278478
AA533648	2277664

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA533709	2277725
AA533716	2277732
AA533772	2277783
AA533785	2277801
AA533940	2277956
AA533963	2277979
AA534171	2278187
AA534173	2278189
AA534235	2278251
AA534246	2278262
AA534281	2278297
AA534298	2278551
AA534395	2278643
AA534418	2278671
AA534419	2278672
AA534435	2278688
AA534505	2278758
AA534540	2278793
AA534543	2278796
AA534644	2278897
AA534778	2279031
AA534827	2279080
AA534873	2279126
AA534933	2279186
AA535185	2279438
AA535218	2279471
AA535377	2279630
AA535384	2279637
AA535610	2279863
AA535695	2279948
AA535755	2280008
AA535837	2280090
AA536036	2280289
AA536129	2280382
AA536175	2280428
AA541515	2287949
AA541528	2287962
AA541537	2287971
AA541587	2288021
AA541677	2288111
AA541678	2288112
AA541703	2288137
AA541808	2288242
AA541813	2288247
AA542906	2291386
AA542981	2291461
AA543102	2291582
AA545726	2307096
AA545727	2307097
AA548098	2318380
AA548124	2318406
AA548129	2318411
AA548238	2318520
AA548244	2318526
AA548303	2318590
AA548465	2318747
AA548472	2318754

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA548600	2318882
AA548722	2319004
AA548764	2319046
AA550927	2321179
AA551005	2321257
AA551065	2321317
AA551146	2321398
AA551189	2321441
AA551252	2321504
AA551464	2321716
AA551773	2322025
AA551894	2322146
AA552154	2322406
AA552253	2322505
AA552321	2322573
AA552410	2322664
AA552570	2322824
AA552715	2322969
AA552842	2323096
AA553726	2324265
AA553789	2324328
AA553826	2324365
AA554010	2324549
AA554018	2324557
AA554326	2324865
AA554358	2324897
AA554598	2325137
AA554661	2325200
AA554718	2325257
AA554735	2325274
AA555115	2325654
AA555160	2325699
AA555194	2325733
AA555227	2325766
AA557174	2327651
AA557260	2327737
AA557321	2327798
AA557408	2327885
AA557683	2328160
AA557888	2328365
AA558280	2328757
AA558281	2328758
AA558547	2329024
AA558611	2329088
AA558636	2329113
AA558755	2329232
AA558976	2329743
AA559055	2329822
AA559906	2331397
AA563986	2335625
AA564005	2335644
AA564017	2335656
AA564067	2335706
AA564119	2335758
AA564238	2335877
AA564277	2335916
AA564484	2336123



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA564505	2336144
AA564513	2336152
AA564843	2336482
AA565044	2336683
AA565214	2336853
AA565272	2336911
AA565334	2336973
AA565420	2337059
AA565446	2337087
AA565382	2337521
AA565996	2337635
AA568138	2341192
AA568207	2341261
AA568406	2341460
AA568488	2341542
AA568518	2341572
AA568538	2341592
AA568990	2342044
AA569130	2342184
AA569247	2342301
AA569344	2342393
AA569354	2342403
AA569434	2343414
AA569439	2343419
AA569482	2343462
AA569493	2343473
AA569765	2343745
AA569909	2343789
AA569813	2343793
AA570171	2344151
AA570182	2344162
AA570519	2344499
AA570665	2344645
AA570748	2343339
AA572308	2347336
AA572395	2347423
AA572938	2347466
AA572950	2347478
AA573187	2347715
AA573368	2347896
AA573557	2348085
AA573559	2348087
AA573575	2348103
AA573646	2360882
AA573737	2348252
AA573742	2348257
AA573762	2348277
AA573787	2348302
AA573811	2348326
AA573817	2348332
AA573824	2348339
AA573910	2348425
AA573974	2348489
AA573975	2348490
AA574223	2348738
AA574227	2348742
AA574248	2348763

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA574288	2348803
AA574397	2348912
AA574436	2348951
AA575882	2350397
AA575898	2350413
AA575933	2350448
AA575935	2350450
AA576243	2350758
AA576252	2350767
AA576404	2353904
AA576407	2353907
AA576425	2353925
AA576669	2354143
AA577326	2354800
AA577463	2354937
AA577490	2354964
AA577553	2355027
AA577557	2355031
AA577585	2355059
AA577598	2355072
AA577672	2355856
AA577800	2355984
AA578009	2356193
AA578209	2356393
AA578265	2356449
AA578295	2356479
AA578511	2356695
AA578577	2356761
AA578646	2356830
AA578773	2356957
AA578881	2357065
AA578904	2357088
AA578976	2357160
AA579026	2357210
AA579039	2357223
AA579160	2357344
AA579384	2357568
AA579412	2357596
AA579486	2357670
AA579596	2357780
AA579617	2357801
AA579835	2355162
AA579904	2355231
AA579998	2355325
AA580097	2355424
AA580279	2355606
AA580399	2355726
AA580417	2355744
AA580771	2358543
AA580829	2358601
AA580900	2358672
AA581117	2358889
AA581222	2358994
AA581523	2359295
AA581716	2359488
AA581829	2360507
AA581846	2360524

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA581892	2360570
AA581956	2360634
AA582252	2359612
AA582469	2359849
AA582591	2359951
AA582596	2359956
AA582728	2360088
AA582805	2360165
AA582930	2360290
AA583350	2367353
AA583353	2367362
AA583431	2368040
AA583449	2368058
AA583461	2368070
AA583567	2368176
AA583574	2368183
AA583773	2368362
AA583801	2368410
AA583899	2368508
AA583997	2368606
AA584026	2368635
AA584428	2369037
AA585110	2384998
AA585278	2385166
AA585430	2385319
AA586522	2398517
AA586744	2397558
AA586969	2397783
AA587020	2397834
AA587140	2397354
AA587226	2398040
AA587243	2398057
AA587348	2398162
AA587459	2398273
AA587468	2398282
AA587630	2401305
AA587806	2401381
AA588023	2402198
AA588083	2402258
AA588358	2401533
AA588474	2401649
AA588685	2402416
AA588754	2402485
AA588801	2402532
AA588828	2402559
AA588848	2401278
AA588892	2401312
AA592908	2408670
AA592947	2408709
AA593159	2408921
AA593335	2409147
AA593668	2408346
AA593879	2403557
AA594131	2409481
AA594232	2409632
AA594540	2409890
AA594681	2410031

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA594682	2410032
AA594780	2410130
AA594950	2410300
AA594976	2410326
AA595047	2410397
AA595100	2410450
AA595193	2410543
AA595339	2410689
AA595471	2410821
AA595581	2410931
AA595582	2410932
AA598470	2432053
AA598483	2432066
AA598487	2432070
AA598517	2432100
AA598520	2432103
AA598531	2432114
AA598538	2432121
AA598561	2432144
AA598567	2432150
AA598572	2432155
AA598595	2432178
AA598597	2432180
AA598598	2432181
AA598601	2432184
AA598621	2432204
AA598625	2432208
AA598652	2432235
AA598659	2432242
AA598668	2432251
AA598675	2432258
AA598758	2432430
AA598775	2432447
AA598779	2432451
AA598787	2432459
AA598795	2432467
AA598796	2432468
AA598797	2432469
AA598803	2432475
AA598808	2432480
AA598809	2432481
AA598815	2432487
AA598817	2432489
AA598828	2432500
AA598849	2432521
AA598868	2432540
AA598874	2432546
AA598943	2432615
AA598956	2432628
AA598965	2432264
AA598974	2432273
AA598975	2432274
AA598982	2432022
AA598983	2432023
AA598987	2432027
AA598996	2432036
AA599064	2432689

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA539078	2432703
AA539092	2432717
AA539094	2432719
AA539099	2432724
AA539102	2432727
AA539107	2432732
AA539120	2432745
AA539179	2432803
AA539229	2432854
AA539324	2432949
AA539416	2433041
AA539424	2433049
AA539533	2433158
AA539534	2433159
AA539650	2433275
AA539669	2433294
AA539711	2433336
AA539717	2433342
AA539741	2433366
AA539864	2433489
AA600060	2433685
AA600257	2433882
AA600974	2434599
AA600998	2434623
AA601289	2434914
AA602361	2436339
AA602430	2435926
AA602472	2436406
AA602522	2436456
AA602634	2436568
AA602662	2436596
AA602675	2436609
AA602758	2436692
AA602773	2436707
AA602794	2436728
AA602957	2436009
AA602961	2436013
AA602979	2436840
AA603041	2436902
AA603135	2436996
AA603158	2437019
AA603265	2437126
AA603334	2437195
AA603572	2437433
AA603834	2437695
AA603861	2437722
AA604229	2445138
AA604474	2445383
AA604497	2444773
AA604619	2445483
AA604815	2445679
AA605077	2444896
AA608514	2456942
AA608546	2456974
AA608548	2456976
AA608567	2456995
AA608568	2456996

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA608575	2457003
AA608583	2457011
AA608636	2457064
AA608679	2457107
AA608730	2457158
AA608749	2457177
AA608752	2457180
AA608770	2457198
AA608832	2457260
AA608856	2457284
AA608893	2457321
AA608952	2457380
AA608967	2457395
AA608974	2457402
AA609002	2457430
AA609004	2457432
AA609005	2457433
AA609049	2457477
AA609054	2457482
AA609056	2457484
AA609088	2457516
AA609094	2457522
AA609106	2457534
AA609135	2457563
AA609138	2457566
AA609189	2457617
AA609218	2457646
AA609284	2457712
AA609300	2457728
AA609304	2457732
AA609323	2457751
AA609334	2457762
AA609365	2457793
AA609368	2457796
AA609384	2457812
AA609385	2457813
AA609392	2457820
AA609394	2457822
AA609415	2457843
AA609422	2457850
AA609430	2457858
AA609436	2457864
AA609456	2457884
AA609471	2457899
AA609474	2457902
AA609485	2457913
AA609556	2457984
AA609566	2457994
AA609584	2458012
AA609594	2458022
AA609641	2458069
AA609686	2458114
AA609723	2458151
AA609731	2458159
AA609744	2458172
AA609749	2458177
AA609887	2458315

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA609891	2458319
AA609914	2458342
AA609982	2458410
AA609983	2458411
AA610052	2458480
AA610071	2458499
AA610352	2458780
AA610444	2458872
AA610476	2458904
AA610581	2459009
AA610734	2459162
AA612573	2464770
AA612666	2463704
AA612829	2463867
AA612864	2463902
AA612874	2463912
AA613314	2464352
AA613587	2464625
AA613772	2466463
AA613891	2466025
AA613908	2466042
AA613916	2466050
AA613933	2466067
AA613935	2466069
AA614105	2466239
AA614274	2466408
AA614350	2466546
AA614525	2466721
AA617696	2504901
AA617722	2504927
AA618183	2505388
AA618277	2505482
AA618435	2505640
AA618484	2505689
AA618486	2505691
AA618601	2505806
AA620301	2524240
AA620334	2524273
AA620396	2524335
AA620404	2524343
AA620421	2524360
AA620437	2524376
AA620446	2524385
AA620453	2524397
AA620463	2524402
AA620466	2524405
AA620472	2524411
AA620485	2524424
AA620523	2524467
AA620553	2524492
AA620556	2524495
AA620565	2524504
AA620591	2524530
AA620607	2524546
AA620608	2524547
AA620611	2524550
AA620614	2524553

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA620642	2524581
AA620697	2524636
AA620715	2524654
AA620747	2524686
AA620750	2524689
AA620757	2524696
AA620760	2524699
AA620783	2524722
AA620927	2524866
AA620995	2524934
AA621001	2524940
AA621019	2524958
AA621031	2524970
AA621073	2525012
AA621165	2525104
AA621218	2525157
AA621310	2525249
AA621324	2525263
AA621332	2525271
AA621342	2525281
AA621355	2525294
AA621363	2525302
AA621405	2525344
AA621457	2525396
AA621478	2525417
AA621730	2525669
AA621750	2524178
AA621761	2524189
AA621820	2525696
AA622344	2526220
AA622418	2526294
AA622432	2526358
AA622765	2526641
AA625141	2537526
AA625145	2537530
AA625222	2537607
AA625228	2537613
AA625270	2537655
AA625415	2537802
AA625467	2537854
AA625485	2537872
AA625538	2537925
AA625558	2537945
AA625567	2537954
AA625574	2537961
AA625628	2538015
AA625634	2538021
AA625641	2538028
AA625662	2538049
AA625666	2538053
AA625675	2538062
AA625682	2538069
AA625764	2538151
AA625784	2538171
AA625788	2538175
AA625791	2538178
AA625812	2538199



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA625833	2538220
AA625890	2538277
AA625907	2538294
AA625951	2538338
AA625979	2538366
AA625990	2538377
AA625995	2538382
AA626011	2538398
AA626028	2538415
AA626146	2538533
AA626152	2538539
AA626161	2538548
AA626167	2538554
AA626242	2538629
AA626247	2538634
AA626248	2538635
AA626274	2538661
AA626275	2538662
AA626315	2538702
AA626365	2538752
AA626439	2538826
AA626509	2538896
AA626511	2538898
AA626698	2539085
AA626784	2539171
AA626788	2539175
AA626847	2539234
AA626864	2539251
AA627073	2540117
AA627785	2539880
AA627855	2540421
AA627939	2539938
AA628113	2540500
AA628132	2540519
AA628146	2540533
AA628190	2540577
AA628194	2540581
AA628409	2540796
AA628410	2540797
AA628417	2540804
AA628526	2540913
AA628530	2540917
AA628867	2541254
AA629020	2541407
AA629027	2541414
AA629033	2541420
AA629039	2541426
AA629117	2541504
AA629251	2541638
AA629262	2541649
AA629269	2541656
AA629324	2541711
AA629325	2541712
AA629355	2541742
AA629357	2541744
AA629524	2552135
AA629528	2552139

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA629534	2552145
AA629554	2552165
AA629581	2552192
AA629591	2552202
AA629608	2552219
AA629707	2552318
AA629719	2552330
AA629771	2552382
AA629801	2552412
AA629804	2552415
AA629808	2552419
AA629838	2552449
AA629849	2552460
AA629903	2552514
AA629910	2552521
AA629911	2552522
AA629991	2552602
AA629999	2552610
AA630006	2552617
AA630016	2552627
AA630084	2552695
AA630104	2552715
AA630286	2552897
AA630298	2552909
AA630303	2552914
AA630325	2552936
AA630328	2552939
AA630346	2552957
AA630373	2552984
AA630374	2552985
AA630376	2552987
AA630382	2552993
AA630445	2553056
AA630545	2553156
AA630584	2553195
AA630620	2553231
AA630771	2553382
AA630800	2553411
AA631009	2553620
AA631152	2553763
AA631176	2553787
AA631178	2553789
AA631206	2553817
AA631303	2553914
AA631419	2554030
AA631437	2554048
AA631446	2554057
AA631460	2554071
AA631608	2554219
AA631868	2554479
AA631903	2554514
AA632154	2555568
AA632291	2555705
AA632363	2555777
AA632427	2555841
AA632742	2556156
AA632954	2556368

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA633347	2555207
AA633399	2555259
AA633439	2555299
AA633577	2556791
AA633658	2556972
AA633768	2556982
AA633794	2557008
AA633811	2557025
AA633835	2557049
AA633846	2557060
AA633866	2557080
AA633909	2557123
AA633957	2557171
AA633993	2557207
AA634008	2557222
AA634039	2557253
AA634120	2557334
AA634164	2557378
AA634196	2557410
AA634213	2557427
AA634216	2557430
AA634291	2557505
AA634360	2557574
AA634379	2557593
AA634408	2557622
AA634424	2557638
AA634431	2557645
AA634479	2557693
AA634482	2557696
AA634772	2557986
AA634799	2558013
AA635024	2558238
AA635136	2558400
AA635238	2619093
AA635393	2559235
AA635590	2559432
AA638939	2562768
AA639059	2562838
AA639174	2562953
AA639317	2563096
AA639786	2563565
AA639791	2563570
AA639902	2563681
AA639964	2563743
AA639972	2563751
AA639999	2563778
AA640038	2563817
AA640105	2563884
AA640133	2563912
AA640141	2563920
AA640280	2565530
AA640458	2565708
AA640474	2565724
AA640574	2565824
AA640637	2565937
AA640716	2565966
AA640889	2566139

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA640928	2566178
AA641074	2566324
AA641092	2566342
AA641195	2566445
AA641520	2566770
AA641585	2565459
AA641601	2565475
AA641623	2566841
AA641636	2566854
AA641769	2566987
AA641810	2589258
AA642383	2567601
AA642471	2567689
AA642495	2567713
AA643506	2568724
AA643685	2568903
AA643720	2568938
AA644080	2569298
AA644092	2569310
AA644099	2569317
AA644211	2569429
AA644237	2569455
AA644334	2569552
AA644345	2569563
AA644495	2569713
AA644550	2569768
AA644563	2569781
AA644624	2569842
AA644678	2569896
AA644700	2569918
AA648194	2574623
AA648209	2574638
AA648318	2574747
AA648508	2574937
AA648757	2575186
AA648989	2575418
AA649012	2575441
AA649107	2575536
AA649193	2575622
AA649298	2575727
AA649627	2576955
AA650114	2577442
AA650230	2577558
AA650241	2577569
AA651712	2583364
AA652167	2583819
AA652206	2583858
AA652478	2584130
AA652600	2584252
AA652667	2584319
AA652846	2584498
AA652925	2584577
AA653353	2589524
AA653508	2589679
AA653601	2589772
AA654527	2590681
AA654557	2590711

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA654621	2590775
AA654650	2590804
AA654675	2590829
AA654709	2590863
AA654875	2591029
AA654995	2591149
AA657411	2593565
AA657463	2593617
AA657438	2593642
AA657830	2593984
AA658207	2594361
AA658393	2594547
AA659142	2595296
AA659179	2595333
AA659388	2595542
AA659391	2595545
AA659693	2595847
AA659719	2595873
AA659725	2595879
AA659764	2595918
AA661464	2615555
AA661927	2616018
AA662111	2616202
AA662369	2616460
AA662406	2616497
AA662658	2616649
AA662702	2616693
AA662733	2616724
AA662822	2616813
AA663058	2617049
AA663092	2617083
AA663123	2617114
AA663160	2617151
AA663192	2617183
AA663310	2617301
AA663453	2617444
AA663556	2617547
AA663592	2617583
AA663826	2617817
AA663960	2617951
AA663981	2617972
AA663983	2617974
AA663995	2617986
AA664007	2617998
AA664067	2618058
AA664101	2618092
AA664104	2618095
AA664105	2618096
AA664155	2618146
AA664389	2618380
AA664406	2618397
AA664472	2618463
AA664480	2618471
AA664482	2618473
AA664567	2619130
AA664798	2619411
AA665209	2380095

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA665507	2620120
AA665901	2620514
AA666087	2620700
AA666348	2620961
AA666366	2620979
AA666405	2621018
AA666418	2621031
AA668178	2629677
AA668224	2629723
AA668230	2629729
AA668470	2629969
AA668531	2630030
AA668692	2630191
AA668897	2630396
AA668951	2630450
AA668959	2630458
AA669124	2630623
AA669183	2630682
AA669218	2630717
AA669222	2630721
AA669300	2630799
AA669314	2630813
AA669341	2630840
AA669438	2630937
AA669443	2630942
AA669451	2630950
AA669452	2630951
AA669484	2630983
AA669544	2631043
AA669750	2631249
AA669823	2631322
AA669976	2631475
AA670123	2631622
AA670200	2631699
AA670205	2631704
AA670280	2631779
AA670286	2631785
AA670296	2631795
AA670330	2631829
AA670353	2631852
AA670356	2631855
AA670359	2631858
AA670390	2631889
AA670408	2631907
AA670411	2631910
AA670429	2631928
AA675891	2775238
AA675892	2775239
AA676225	2656747
AA676265	2656787
AA676296	2656818
AA676422	2656944
AA676460	2656982
AA676470	2656992
AA676515	2657037
AA676590	2657112
AA676598	2657120

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA675604	2657125
AA675740	2657262
AA675765	2657287
AA675840	2657362
AA675865	2657387
AA675899	2657421
AA675920	2657442
AA675948	2657470
AA675961	2657483
AA675998	2657520
AA677023	2657545
AA677025	2657547
AA677050	2657572
AA677165	2657687
AA677185	2657707
AA677200	2657722
AA677206	2657728
AA677282	2657804
AA677287	2657809
AA677295	2657817
AA677300	2657822
AA677337	2657859
AA677388	2657910
AA677397	2657919
AA677403	2657925
AA677457	2657979
AA677461	2657983
AA677499	2658021
AA677522	2658044
AA677531	2658053
AA677534	2658056
AA677550	2658072
AA677561	2658083
AA677572	2658094
AA677574	2658096
AA677575	2658097
AA677629	2658151
AA677643	2658165
AA677655	2658177
AA677706	2658228
AA677984	2658506
AA678021	2658543
AA678065	2658587
AA678072	2658594
AA678087	2658609
AA678135	2658657
AA678164	2658686
AA678203	2658725
AA678295	2658817
AA678348	2658870
AA678361	2658883
AA678414	2658936
AA678873	2659395
AA678975	2659497
AA679068	2659590
AA679116	2659638
AA679180	2659702

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA679304	2659826
AA679314	2659836
AA679341	2659863
AA679352	2659874
AA679414	2659936
AA679434	2659956
AA679547	2660069
AA679569	2660091
AA679791	2660313
AA679907	2656374
AA679935	2656402
AA680052	2656519
AA680070	2656537
AA680136	2656603
AA680186	2656653
AA680244	2656212
AA680351	2656658
AA682233	2669365
AA682244	2669376
AA682252	2669384
AA682274	2669591
AA682283	2669600
AA682293	2669610
AA682321	2669638
AA682386	2669667
AA682399	2669680
AA682405	2669686
AA682423	2669704
AA682425	2669706
AA682439	2669720
AA682452	2669733
AA682533	2669814
AA682545	2669826
AA682549	2669830
AA682565	2669846
AA682627	2669908
AA682631	2669912
AA682642	2669923
AA682819	2669502
AA682838	2669521
AA682851	2669534
AA682905	2668796
AA682910	2668801
AA683050	2668941
AA683075	2668966
AA683077	2668968
AA683080	2668971
AA683085	2668976
AA683136	2669027
AA683246	2669137
AA683314	2669205
AA683338	2669229
AA683520	2670118
AA683546	2670144
AA683557	2670155
AA687179	2675406
AA687216	2674421



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA687336	2675527
AA687370	2675561
AA687495	2675686
AA687538	2674444
AA687571	2674477
AA687674	2674580
AA687675	2674581
AA687718	2674624
AA687733	2674639
AA689334	2690433
AA689392	2689745
AA693742	2694680
AA693922	2694860
AA694055	2694993
AA694120	2695058
AA694186	2695124
AA694271	2695209
AA694477	2695415
AA699390	2702584
AA699427	2702621
AA699442	2702636
AA699494	2703650
AA699560	2703707
AA699573	2703720
AA699601	2703748
AA699674	2703821
AA699707	2702670
AA699714	2702677
AA699719	2702682
AA699762	2702725
AA699770	2702733
AA699895	2702858
AA699926	2702889
AA699931	2702894
AA699999	2702962
AA700054	2703017
AA700218	2703181
AA700232	2703195
AA700415	2703378
AA700509	2703472
AA700599	2703562
AA700604	2703567
AA700680	2703845
AA700736	2703901
AA700739	2703904
AA700843	2704008
AA700876	2704041
AA700904	2704069
AA701034	2704199
AA701046	2704211
AA701315	2704480
AA701328	2704493
AA701351	2704516
AA701455	2704620
AA701467	2704632
AA701502	2704667
AA701519	2704684

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA701587	2704752
AA701607	2704772
AA701645	2704810
AA701652	2704817
AA701655	2704820
AA701667	2704832
AA701900	2705013
AA701931	2705044
AA701933	2705046
AA701948	2705061
AA701976	2705089
AA701978	2705091
AA701980	2705093
AA701981	2705094
AA701996	2705109
AA702077	2705190
AA702084	2705197
AA702131	2705244
AA702193	2705306
AA702230	2705343
AA702247	2705360
AA702327	2705440
AA702335	2705448
AA702398	2705511
AA702422	2705535
AA702480	2705593
AA702640	2705753
AA702679	2705792
AA702684	2705797
AA702738	2705851
AA702781	2705894
AA702785	2705898
AA702788	2705901
AA702802	2705915
AA702803	2705916
AA702888	2706001
AA702891	2706004
AA702942	2706055
AA702973	2706086
AA703000	2706113
AA703004	2706117
AA703046	2706159
AA703048	2706161
AA703079	2706192
AA703114	2706227
AA703117	2706230
AA703147	2706260
AA703159	2706272
AA703161	2706274
AA703219	2706332
AA703249	2706362
AA703387	2713305
AA703396	2713314
AA703652	2713570
AA703660	2713578
AA703816	2713734
AA703838	2713756

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA703925	2713843
AA704005	2713923
AA704255	2714173
AA704278	2714196
AA704323	2714241
AA704332	2714250
AA704370	2714283
AA704459	2714377
AA704537	2714455
AA704587	2714505
AA704650	2714568
AA704690	2714608
AA704718	2714636
AA704749	2714667
AA704777	2714695
AA704802	2714720
AA704816	2714734
AA704844	2714762
AA704858	2714776
AA704903	2714826
AA704943	2714861
AA705041	2714959
AA705047	2714965
AA705054	2714972
AA705053	2714976
AA705061	2714979
AA705072	2714990
AA705077	2714995
AA705103	2715021
AA705142	2715060
AA705184	2715102
AA705237	2715135
AA705258	2715176
AA705269	2715187
AA705319	2715237
AA705376	2715294
AA705433	2715351
AA705447	2715365
AA705516	2715434
AA705525	2715443
AA705546	2715464
AA705736	2715654
AA705743	2715661
AA705813	2715731
AA705819	2715737
AA705825	2715743
AA705840	2715758
AA705858	2715776
AA705957	2715875
AA705986	2715904
AA706018	2715936
AA706224	2716142
AA706241	2716159
AA706314	2716232
AA706388	2716306
AA706738	2716656
AA706764	2716682

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA706795	2716713
AA706797	2716715
AA706829	2716747
AA706839	2716757
AA706860	2716778
AA706870	2716788
AA706901	2716819
AA706935	2716853
AA706955	2716873
AA706964	2716882
AA706968	2716886
AA706969	2716887
AA707008	2716926
AA707080	2716998
AA707086	2717004
AA707118	2717036
AA707121	2717039
AA707125	2717043
AA707219	2717137
AA707336	2717254
AA707377	2717295
AA707400	2717318
AA707450	2717368
AA707490	2717408
AA707511	2717429
AA707607	2717525
AA707615	2717533
AA707659	2717577
AA707750	2717668
AA707753	2717671
AA707794	2717712
AA707840	2717758
AA707871	2717789
AA707872	2717790
AA707935	2717853
AA708003	2717921
AA708016	2717934
AA708143	2718061
AA708152	2718070
AA708189	2718107
AA708195	2718113
AA708201	2718119
AA708240	2718158
AA708342	2718260
AA708348	2718266
AA708431	2718349
AA708438	2718356
AA708440	2718358
AA708441	2718359
AA708446	2718364
AA708457	2718375
AA708501	2718419
AA708605	2718523
AA708676	2718594
AA708686	2718604
AA708690	2718608
AA708958	2718876

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA709044	2718962
AA709070	2718988
AA709208	2719126
AA709271	2719189
AA709333	2719251
AA709370	2719288
AA709388	2719306
AA713504	2725778
AA713517	2725791
AA713530	2725804
AA713580	2725854
AA713687	2725961
AA713760	2726034
AA714022	2726296
AA714481	2726755
AA714567	2726841
AA714902	2727176
AA714934	2727208
AA715000	2727274
AA715036	2727310
AA715365	2727639
AA716097	2728371
AA716414	2728688
AA716751	2729025
AA718910	2732009
AA719257	2732356
AA719530	2732629
AA719797	2732896
AA720578	2736713
AA721298	2737433
AA721375	2737510
AA722090	2739797
AA722204	2739911
AA722823	2740530
AA723045	2740752
AA723130	2740837
AA723521	2741228
AA723525	2741232
AA723584	2741291
AA723679	2741386
AA724392	2742099
AA724553	2742260
AA724619	2742326
AA724868	2742575
AA725298	2743005
AA725397	2743104
AA725400	2743107
AA725525	2743232
AA725564	2743271
AA725836	2743543
AA729119	2750478
AA730111	2751392
AA730534	2751738
AA730780	2751984
AA731507	2753663
AA731537	2753693
AA731556	2753712

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA731700	2752589
AA731872	2752683
AA732326	2752933
AA732352	2752959
AA732538	2753145
AA732832	2775279
AA733027	2754386
AA733038	2775295
AA733061	2775300
AA733090	2754449
AA733105	2775307
AA733177	2754536
AA736613	2767847
AA737421	2768178
AA737949	2768706
AA740151	2778743
AA740261	2778853
AA740574	2779166
AA740610	2779202
AA740911	2779503
AA741050	2779642
AA741056	2779648
AA741297	2779889
AA742189	2784189
AA742231	2784231
AA742522	2782104
AA742701	2782207
AA743453	2782959
AA743621	2783127
AA743680	2784496
AA743710	2784526
AA743975	2784725
AA744239	2784989
AA744367	2785117
AA744771	2783535
AA744849	2783613
AA744876	2783640
AA745059	2783823
AA745616	2785602
AA745678	2785664
AA745694	2785680
AA746353	2786339
AA746487	2786473
AA746824	2786810
AA747091	2787049
AA747515	2787473
AA747772	2787730
AA747819	2787777
AA747909	2787867
AA748031	2787989
AA748033	2787991
AA748038	2787996
AA748064	2788022
AA748444	2788402
AA748525	2788483
AA748847	2788805
AA749045	2789003

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA757282	2805145
AA757401	2805264
AA757417	2805280
AA757564	2805427
AA757588	2805451
AA757604	2805467
AA757659	2805522
AA757711	2805574
AA757717	2805580
AA757732	2805595
AA757754	2805617
AA757764	2805627
AA758023	2805886
AA758154	2806017
AA758348	2806211
AA758375	2806238
AA758470	2806333
AA758592	2806455
AA759202	2807065
AA760738	2809668
AA760894	2809824
AA761069	2809939
AA761562	2810432
AA761640	2810570
AA761739	2810669
AA761831	2810761
AA764981	2816219
AA764991	2816229
AA765140	2816378
AA765712	2816950
AA765884	2817122
AA765909	2817147
AA765947	2817185
AA765974	2817212
AA766050	2817288
AA766644	2817892
AA766817	2818055
AA767154	2819735
AA767323	2818338
AA767439	2818454
AA767457	2818472
AA767764	2818779
AA767779	2818794
AA767784	2818799
AA768109	2819124
AA768348	2819363
AA768762	2819477
AA768951	2820189
AA769055	2820293
AA769102	2820340
AA769127	2820365
AA769142	2820380
AA769434	2820672
AA769696	2820934
AA769722	2820960
AA769865	2821103
AA769937	2821175

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA770006	2821244
AA770272	2821510
AA770505	2821743
AA770690	2821928
AA772075	2823858
AA772465	2824248
AA772497	2824280
AA772603	2824386
AA772683	2824466
AA772736	2824519
AA772803	2825645
AA773009	2824580
AA773072	2824643
AA773139	2824710
AA773362	2824933
AA773374	2824945
AA773478	2825049
AA773641	2825212
AA773787	2825358
AA773998	2825887
AA774230	2825528
AA774247	2825545
AA774265	2825563
AA774501	2833835
AA774523	2833857
AA774645	2833979
AA774665	2833999
AA774678	2834012
AA774750	2834084
AA774869	2834203
AA775223	2834557
AA775257	2834591
AA775259	2834593
AA775325	2834659
AA775355	2834689
AA775405	2834739
AA775422	2834756
AA775431	2834765
AA775447	2834781
AA775557	2834891
AA775616	2834950
AA775625	2834959
AA775774	2835108
AA775791	2835125
AA775810	2835144
AA775824	2835158
AA775857	2835191
AA775863	2835197
AA775865	2835199
AA775888	2835222
AA775914	2835248
AA775918	2835252
AA775957	2835291
AA776041	2835375
AA776434	2835768
AA776585	2835919
AA776692	2836026



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA776702	2836036
AA776709	2836043
AA776740	2836074
AA776755	2836089
AA776810	2836141
AA777024	2836355
AA777092	2836423
AA777098	2836429
AA777187	2836518
AA777265	2836596
AA777394	2836725
AA777417	2836748
AA777486	2836967
AA777489	2836968
AA777529	2837008
AA777536	2837015
AA777555	2837034
AA777590	2837069
AA777670	2837149
AA777696	2837175
AA777700	2837179
AA777705	2837184
AA777779	2837258
AA777781	2837260
AA777883	2836876
AA777886	2836879
AA777902	2837303
AA778038	2837439
AA778089	2837490
AA778098	2837499
AA778109	2837510
AA778206	2836921
AA778533	2837864
AA778562	2837893
AA778571	2837902
AA778596	2837927
AA778603	2837934
AA778636	2837967
AA778646	2837977
AA778653	2837984
AA778663	2837994
AA778675	2838006
AA778717	2838048
AA778839	2838170
AA778869	2838200
AA779048	2838379
AA779165	2838496
AA779176	2838507
AA779212	2838543
AA779221	2838552
AA779225	2838556
AA779278	2838609
AA779380	2838711
AA779383	2838714
AA779391	2838722
AA779427	2838758
AA779457	2838788

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA779602	2838933
AA779670	2839001
AA779728	2839059
AA779919	2839250
AA779949	2839280
AA779968	2839299
AA779972	2839303
AA780027	2839358
AA780190	2839521
AA780301	2839632
AA780365	2839696
AA780591	2839922
AA780695	2840026
AA780841	2840172
AA781086	2840417
AA782138	2841469
AA782292	2841623
AA782380	2841711
AA782483	2841814
AA782592	2841923
AA782644	2841975
AA782769	2842100
AA788738	2848858
AA788779	2848899
AA788780	2848900
AA788875	2848995
AA788970	2849090
AA789328	2849448
AA804375	2875888
AA804544	2873675
AA804659	2876060
AA804740	2876095
AA804879	2876206
AA805228	2876380
AA805361	2874111
AA805604	2874354
AA805865	2874615
AA806040	2874790
AA806057	2874807
AA806060	2874810
AA806448	2875198
AA806555	2875305
AA806717	2875467
AA806808	2875558
AA807276	2876852
AA807370	2876946
AA808003	2877409
AA808146	2877552
AA808211	2877617
AA808349	2877755
AA808466	2877872
AA808492	2877898
AA808582	2877988
AA809784	2879190
AA810159	2879565
AA810225	2879584
AA810340	2879699

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA810418	2875690
AA810905	2880516
AA811333	2880944
AA811365	2880976
AA812081	2881692
AA812193	2881804
AA812209	2881820
AA812581	2882645
AA812676	2882740
AA812993	2883057
AA812996	2883060
AA813108	2883093
AA813266	2883251
AA813287	2883272
AA813373	2883358
AA813703	2882393
AA813941	2883537
AA814091	2883687
AA814412	2884008
AA814414	2884010
AA814496	2884092
AA814500	2884096
AA814634	2884230
AA814822	2884418
AA814859	2884455
AA815173	2884769
AA815305	2884901
AA824395	2896279
AA824401	2896285
AA824416	2896438
AA825194	2898491
AA825265	2898566
AA825512	2898824
AA825612	2898924
AA825768	2899080
AA825940	2899252
AA826237	2899549
AA826244	2899556
AA826324	2899636
AA826464	2898281
AA826491	2898311
AA826649	2900646
AA826906	2900903
AA827079	2901076
AA827196	2901193
AA827331	2899772
AA827369	2899810
AA827405	2899846
AA827738	2901297
AA827816	2900179
AA827875	2900238
AA827878	2900241
AA827968	2900331
AA828243	2901342
AA828708	2901807
AA829236	2902335
AA829350	2902449

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA829473	2902572
AA829547	2902646
AA829850	2902949
AA829973	2903072
AA830635	2903734
AA830807	2903906
AA830856	2903955
AA830959	2904058
AA831078	2904177
AA831148	2904247
AA831278	2904377
AA831795	2904894
AA831876	2904975
AA832480	2905579
AA833543	2907271
AA833759	2908527
AA834102	2907701
AA834540	2908139
AA834946	2908674
AA835377	2909105
AA835490	2909218
AA835638	2909957
AA835708	2910027
AA836233	2910552
AA836306	2910625
AA836488	2910807
AA836682	2909940
AA836834	2912033
AA836962	2912161
AA837048	2912247
AA837401	2912600
AA837457	2912656
AA838003	2913660
AA838377	2913176
AA838410	2913209
AA838431	2913230
AA838482	2913281
AA838681	2914793
AA838691	2914803
AA838697	2914809
AA838748	2914860
AA843133	2929651
AA843176	2929694
AA843216	2929734
AA843242	2929760
AA843326	2929844
AA843414	2929932
AA843531	2930049
AA843592	2930110
AA843663	2930181
AA843683	2933039
AA843706	2933062
AA843845	2930296
AA844070	2930521
AA844081	2930532
AA844124	2930575
AA844141	2930592

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA844230	2930681
AA844447	2930898
AA844734	2931185
AA844979	2931430
AA844998	2931449
AA845156	2931607
AA845168	2931619
AA845340	2933099
AA845374	2933133
AA845390	2933149
AA845409	2933168
AA845442	2933201
AA845575	2933334
AA845584	2933343
AA846152	2932292
AA846308	2932448
AA846335	2932475
AA846576	2932716
AA846626	2932766
AA847210	2933728
AA847348	2933866
AA847380	2933898
AA847452	2933970
AA847597	2934115
AA847656	2934174
AA848129	2934647
AA852908	2939647
AA852998	2939737
AA853183	2939922
AA853882	2940621
AA854071	2941609
AA854293	2941831
AA854305	2941843
AA854319	2941857
AA855093	2942631
AA855153	2942696
AA856556	2944858
AA856719	2945021
AA856914	2945216
AA857035	2945337
AA857069	2945371
AA857163	2945465
AA857212	2945514
AA857413	2945715
AA857476	2945778
AA857478	2945780
AA857496	2945798
AA857509	2945811
AA857632	2945934
AA857748	2946050
AA857804	2946106
AA857809	2946111
AA857872	2946174
AA857936	2946238
AA858389	2946691
AA858390	2946692
AA858396	2946698

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA860246	2954241
AA860287	2954282
AA860541	2952681
AA860839	2952979
AA860986	2953126
AA861428	2953568
AA861631	2953771
AA861930	2952554
AA861986	2954465
AA862250	2954729
AA862309	2954788
AA862465	2954944
AA862814	2955293
AA862821	2955300
AA862855	2955334
AA862992	2955471
AA863125	2955604
AA863169	2955648
AA863204	2955683
AA863292	2955771
AA863314	2955793
AA863393	2955872
AA863449	2955928
AA864406	2958719
AA864681	2958994
AA864704	2959017
AA864840	2959153
AA864875	2959188
AA864975	2959288
AA865150	2957426
AA865185	2957461
AA865464	2957740
AA865873	2958149
AA865913	2958189
AA865924	2958200
AA866029	2958305
AA866035	2958311
AA868038	2963483
AA868337	2963782
AA868512	2963957
AA868515	2963960
AA868720	2964165
AA868802	2964247
AA868929	2964374
AA872006	2968044
AA872034	2968072
AA872057	2968235
AA872122	2968300
AA872143	2968321
AA872153	2968331
AA872257	2968435
AA872323	2968501
AA872383	2968561
AA872397	2968575
AA872402	2968580
AA872436	2968614
AA872454	2968632

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA872602	2963780
AA872606	2963784
AA872692	2968132
AA872704	2968144
AA872710	2968832
AA872729	2968851
AA872856	2968980
AA872969	2969091
AA872979	2969101
AA873060	2969182
AA873089	2969211
AA873110	2969232
AA873159	2969281
AA873182	2969304
AA873291	2969413
AA873351	2969473
AA873355	2969477
AA873459	2969581
AA873534	2969656
AA873577	2969699
AA873578	2969700
AA873604	2969726
AA873635	2969757
AA873762	2968148
AA873828	2968214
AA875888	2985247
AA875913	2985272
AA875936	2985295
AA875953	2985312
AA876021	2984862
AA876354	2985431
AA876375	2985452
AA876384	2985461
AA876439	2985516
AA876668	2985745
AA876730	2985807
AA876897	2985974
AA877347	2986424
AA877460	2985167
AA877739	2986754
AA877796	2986761
AA877815	2986780
AA877864	2986829
AA877997	2986962
AA878120	2987085
AA878195	2987160
AA878210	2987175
AA878211	2987176
AA878212	2987177
AA878395	2987360
AA878561	2987526
AA878731	2987696
AA878739	2987704
AA878731	2987746
AA878890	2987845
AA879423	2988534
AA879435	2988546

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA879437	2988548
AA879474	2988585
AA883100	2992699
AA883114	2992713
AA883127	2992726
AA883132	2994608
AA883160	2994636
AA883170	2994646
AA883181	2994657
AA883187	2994663
AA883299	2992829
AA883391	2992921
AA883431	2992961
AA883504	2993034
AA883508	2993038
AA883580	2993110
AA883612	2993142
AA883660	2993190
AA883679	2993209
AA883680	2993210
AA883711	2993241
AA883735	2993265
AA883755	2993285
AA883800	2993330
AA883901	2993431
AA883914	2993444
AA884098	2993628
AA884119	2993649
AA884249	2993779
AA884317	2993847
AA884321	2993851
AA884382	2993912
AA884397	2993927
AA884428	2993958
AA884622	2994152
AA884713	2994694
AA884897	2994878
AA884922	2994903
AA884926	2994907
AA884972	2994953
AA884992	2994973
AA885052	2995033
AA885096	2995077
AA885140	2995121
AA885141	2995122
AA885293	2994370
AA885311	2994388
AA885470	2994547
AA885471	2994548
AA885478	2994555
AA885642	3000750
AA885770	3000878
AA885780	3000888
AA885819	3000927
AA885835	3000943
AA885851	3000959
AA885902	3001010



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA886333	3001441
AA886406	3001514
AA886497	3001605
AA886739	3001847
AA886748	3001856
AA886792	3001900
AA886818	3001926
AA886370	3001978
AA886357	3002065
AA886398	3002106
AA887054	3002162
AA887201	3002309
AA887224	3002332
AA887235	3002343
AA888014	3003689
AA888121	3003796
AA888589	3004264
AA888665	3004340
AA889397	3016276
AA889785	3016664
AA889969	3016848
AA890010	3016889
AA890032	3016911
AA890098	3016977
AA890147	3017026
AA890206	3017085
AA890326	3017205
AA890327	3017206
AA890421	3017300
AA890660	3017539
AA894408	3030809
AA894557	3030958
AA894577	3030978
AA894687	3031088
AA894781	3031182
AA894929	3031330
AA896959	3033352
AA902127	3037317
AA902249	3037439
AA902256	3037446
AA902388	3037511
AA902625	3037748
AA902721	3037844
AA902831	3037954
AA902953	3038076
AA902964	3038087
AA903139	3038262
AA903809	3038932
AA904265	3039388
AA904647	3039770
AA904776	3039899
AA904969	3040092
AA905065	3040188
AA905139	3040262
AA905838	3040961
AA905896	3041019
AA906257	3041380

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA906582	3042168
AA906652	3042238
AA906868	3042112
AA906997	3042457
AA907003	3042463
AA907068	3042528
AA907575	3043035
AA907660	3043120
AA907714	3043174
AA908797	3048202
AA908930	3048335
AA908961	3048366
AA909045	3048450
AA909768	3050567
AA909977	3049267
AA910369	3049659
AA911154	3050444
AA911236	3050526
AA911245	3050535
AA911317	3050681
AA911903	3051295
AA911971	3051363
AA912071	3051463
AA912233	3051625
AA912713	3052105
AA912796	3052188
AA913138	3052530
AA916145	3055537
AA916323	3055715
AA916325	3055717
AA916635	3056027
AA916753	3056145
AA917666	3057556
AA917937	3057827
AA918023	3057913
AA918370	3058260
AA918993	3058883
AA921906	3069215
AA922237	3069546
AA922309	3069618
AA922326	3069635
AA923172	3070481
AA923278	3070587
AA923547	3070856
AA926656	3075553
AA926926	3075823
AA926992	3075889
AA927118	3076015
AA927433	3076330
AA927544	3076441
AA927818	3077108
AA928420	3077576
AA928427	3077583
AA931164	3085550
AA931228	3085614
AA931237	3085623
AA931583	3085969

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA931666	3086052
AA931725	3086111
AA931943	3086329
AA932059	3086372
AA932114	3086427
AA932252	3087164
AA932331	3086569
AA932402	3087163
AA932569	3087350
AA933573	3088841
AA933627	3089895
AA933888	3090156
AA934368	3091325
AA934530	3091687
AA934755	3091967
AA934762	3091974
AA934851	3092063
AA934879	3092091
AA935181	3092338
AA935485	3092642
AA935526	3092683
AA935560	3092717
AA935798	3092955
AA935811	3092968
AA935845	3093002
AA936089	3093246
AA936187	3094105
AA936262	3094180
AA936532	3094450
AA936783	3094817
AA936792	3094826
AA937212	3095323
AA937513	3095624
AA937551	3095662
AA937773	3095884
AA938156	3096067
AA938181	3096292
AA938717	3096745
AA939023	3098936
AA939199	3099112
AA939266	3099179
AA939275	3099188
AA946679	3110074
AA946873	3110268
AA946883	3110278
AA946995	3110390
AA947278	3108531
AA947441	3108694
AA947511	3108764
AA947922	3109175
AA948037	3109290
AA948223	3109476
AA948276	3109529
AA948320	3109573
AA953229	3117376
AA953328	3117475
AA953357	3117504

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA953391	3117538
AA953892	3116810
AA953973	3116891
AA954079	3116997
AA954118	3117813
AA954674	3118369
AA954939	3118634
AA955007	3118702
AA960820	3127374
AA960924	3127478
AA961085	3127639
AA961361	3133534
AA962119	3134283
AA962236	3134400
AA962300	3134464
AA962541	3134705
AA962550	3134714
AA962587	3134751
AA968556	3143736
AA968621	3143801
AA968756	3143936
AA968896	3144076
AA969184	3144364
AA969214	3144394
AA969459	3144639
AA969512	3144692
AA969613	3144793
AA970266	3145779
AA970314	3145827
AA970570	3145077
AA970720	3146010
AA971532	3146822
AA971641	3146931
AA971698	3146988
AA971700	3146990
AA972352	3147642
AA972530	3145294
AA972598	3147778
AA972602	3147782
AA972625	3147805
AA972792	3147972
AA972883	3148063
AA973273	3148453
AA973560	3148740
AA973620	3148800
AA973927	3149107
AA974137	3149317
AA974348	3149528
AA974402	3149582
AA974495	3149675
AA974540	3149720
AA974621	3149801
AA974826	3150618
AA974908	3150700
AA974971	3150763
AA974999	3150791
AA975010	3150802

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA975209	3151001
AA975275	3151067
AA975388	3151130
AA975556	3151348
AA976063	3151855
AA976544	3153990
AA976561	3154007
AA976714	3154160
AA977172	3154618
AA977197	3154643
AA977226	3154672
AA977296	3154742
AA977406	3154852
AA977833	3155279
AA977871	3155317
AA978126	3155572
AA978214	3155560
AA978353	3153962
AA983362	3161887
AA983467	3161992
AA983560	3162085
AA983832	3162357
AA984043	3162568
AA984134	3162659
AA984173	3162698
AA984384	3162909
AA984407	3162932
AA984460	3162985
AA984586	3163111
AA984690	3163215
AA984744	3163269
AA985190	3163715
AA985327	3163852
AA987290	3172654
AA987442	3172806
AA987644	3173008
AA987997	3173361
AA988011	3173375
AA988102	3173466
AA988125	3173489
AA988345	3174037
AA988468	3174160
AA988520	3174212
AA988630	3173621
AA988701	3173692
AA988746	3174317
AA988798	3174369
AA988920	3174491
AA989049	3174620
AA989139	3173761
AA989210	3173832
AA989473	3174837
AA991196	3177685
AA991398	3177887
AA991856	3178738
AA992217	3178331
AA992583	3179339

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AA992596	3179352
AA992606	3179362
AA992672	3178406
AA992882	3179427
AA993414	3179959
AA993438	3179983
AA993550	3180095
AA994034	3180579
AA994534	3181079
AA994694	3181183
AA994757	3181246
AA994801	3181290
AA994811	3181300
AA994857	3181346
AA994966	3181455
AA994993	3181482
AA995066	3181555
AA995483	3181972
AA995508	3181997
AA995613	3182102
AA995747	3182236
AA995981	3182470
AA996010	3182499
AA996028	3182517
AA996104	3182593
AA996131	3182620
AA996230	3182719
AA999953	3190508
AB000095	2924600
AB000220	3426162
AB000468	1843400
AB000509	2982670
AB000584	1813326
AB000887	2189952
AB000888	2467297
AB001106	1850083
AB001636	2696612
AB001872	2879897
AB002303	2224550
AB002306	2224556
AB002311	2224566
AB002312	2224568
AB002319	2224582
AB002329	2224602
AB002330	2224604
AB002331	2224606
AB002346	6634018
AB002347	2224638
AB002350	2224644
AB002353	2224650
AB002357	2224658
AB002365	2224674
AB002366	2224676
AB002369	2224682
AB002370	2280483
AB002375	2280486
AB002380	2224704

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AB002382	2224708
AB002393	2224710
AB002386	2224716
AB002387	2224718
AB002391	6683696
AB002451	2943817
AB002806	2780782
AB003103	1945610
AB004047	2116654
AB004066	2308996
AB004304	4176417
AB004788	3184185
AB004851	3702685
AB004857	2911111
AB004903	2443360
AB005289	3228278
AB005535	2326258
AB005621	2832907
AB006077	2564010
AB006534	2924619
AB006621	2564313
AB006625	2564321
AB006965	2385511
AB006968	2463524
AB007191	8698842
AB007510	2463576
AB007618	2465177
AB007867	2662094
AB007870	2662100
AB007873	2887446
AB007881	2887418
AB007883	2887420
AB007884	2887422
AB007885	2887424
AB007891	2887440
AB007892	2887434
AB007893	2887436
AB007896	2662152
AB007898	2662156
AB007899	2662158
AB007916	6683704
AB007929	3413881
AB007930	3413883
AB007931	3413885
AB007932	3413887
AB007934	3413891
AB007935	3413893
AB007941	3413905
AB007947	3413917
AB007949	3413921
AB007956	3413930
AB007957	3413931
AB007960	3413934
AB007963	3413937
AB007969	3413944
AB007971	3413947
AB008109	2554613

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AB008226	3370992
AB008430	2766164
AB008681	2760152
AB009284	2723392
AB009285	3341898
AB010427	3337112
AB010882	2967451
AB011004	3273315
AB011079	2897815
AB011087	3043553
AB011103	3043585
AB011108	3043595
AB011119	3043617
AB011120	3043619
AB011132	6635202
AB011140	3043659
AB011145	3043669
AB011147	3043673
AB011148	3043675
AB011155	3043689
AB011158	3043695
AB011159	3043697
AB011164	3043707
AB011165	3043709
AB011169	3043717
AB011170	3043719
AB011175	3043729
AB011472	4519430
AB012130	3097315
AB012910	3721650
AB013897	6177784
AB013918	3410908
AB014458	3928761
AB014486	4062959
AB014511	3327035
AB014514	3327041
AB014519	3327051
AB014521	3327055
AB014525	3327063
AB014531	3327075
AB014533	3327079
AB014536	3327085
AB014542	3327097
AB014543	3327099
AB014547	3327107
AB014548	3327109
AB014552	3327117
AB014560	3327133
AB014563	3327139
AB014569	3327151
AB014577	3327167
AB014579	3327171
AB014589	3327191
AB014597	3327207
AB014598	3327209
AB014601	3327215
AB014610	3327233



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AB014888	3402484
AB015317	3641673
AB015333	3970855
AB015639	5821139
AB015644	3986199
AB015907	4218063
AB016068	3721863
AB016087	5821142
AB016533	4586430
AB017004	4239949
AB017007	4239955
AB017430	4519442
AB017971	4520349
AB018080	3978556
AB018257	3882148
AB018266	3882166
AB018268	3882170
AB018270	3882174
AB018274	3882182
AB018276	3882186
AB018280	3882194
AB018281	3882196
AB018284	3882202
AB018296	3882226
AB018301	3882236
AB018304	3882242
AB018305	3882244
AB018313	3882260
AB018315	3882264
AB018319	3882272
AB018320	3882274
AB018324	3882282
AB018327	3882288
AB018330	3882294
AB018331	3882296
AB018334	3882302
AB018337	3882308
AB018338	3882310
AB018340	3882314
AB018342	3882318
AB018344	3882322
AB018346	3882326
AB018351	3882336
AB018352	3882338
AB018353	3882340
AB018358	6009489
AB019002	4587082
AB019392	4587122
AB019435	4760646
AB019524	4519939
AB019563	3885366
AB019564	3885367
AB019566	3885369
AB019568	3885371
AB019601	5051742
AB019987	4092845
AB020631	4240136

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AB020633	4240140
AB020636	4240146
AB020637	4240148
AB020639	4240152
AB020643	4240160
AB020646	4240166
AB020650	4240174
AB020652	4240178
AB020657	4240188
AB020658	4240190
AB020661	4240196
AB020665	4240204
AB020669	4240212
AB020673	4240220
AB020679	4240232
AB020680	4240234
AB020682	4240238
AB020686	4240246
AB020689	4240252
AB020692	4240258
AB020693	4240260
AB020694	4240262
AB020698	4240270
AB020705	4240284
AB020707	4240288
AB020723	4240320
AB020724	4240322
AB020866	4003386
AB020880	4996281
AB020981	4996287
AB021179	4062855
AB021288	4038732
AB021663	4996450
AB021981	4903003
AB022663	5019617
AB023145	4589487
AB023150	4589509
AB023153	4589515
AB023157	4589523
AB023163	4589535
AB023173	4589555
AB023177	4589563
AB023179	4589567
AB023182	4589573
AB023196	4589601
AB023198	4589605
AB023201	4589611
AB023205	4589619
AB023206	4589621
AB023210	4589629
AB023215	4589639
AB023224	4589657
AB023227	4589669
AB023230	4589675
AB024334	6016837
AB024435	4520137
AB024518	4520327

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AB024704	4589928
AB026190	4650843
AB026257	5006264
AB026723	5931601
AB027013	5931609
AB027466	6172220
AB028624	5103045
AB028945	5689380
AB028948	5689386
AB028951	5689392
AB028956	5689402
AB028964	5689413
AB028969	5689429
AB028971	5689432
AB028973	5689436
AB028977	5689444
AB028981	5689452
AB028995	5689480
AB029000	5689490
AB029004	5689498
AB029008	5689505
AB029020	5689530
AB029025	5689540
AB029027	5689544
AB029028	5689546
AB029036	5689562
AB029290	5821433
AB032948	6329727
AB032951	6329743
AB032954	6382009
AB032957	6329813
AB032959	6329832
AB032969	6329965
AB032981	6330115
AB032983	6330128
AB032990	6330168
AB032991	6330170
AB032994	6330182
AB033007	6330242
AB033010	6330254
AB033017	6330344
AB033020	6330364
AB033029	6330432
AB033033	6330496
AB033042	6330568
AB033048	6330610
AB033049	6330616
AB033051	6330667
AB033059	6330728
AB033061	6330743
AB033069	6330811
AB033070	6330813
AB033071	6330825
AB033074	6330846
AB033075	6330853
AB033076	6330860
AB033078	6330873

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AB033079	6382025
AB033080	6330892
AB033091	6331191
AB033092	6331198
AB033114	6331406
AB033899	6174679
AC000065	1669367
AC000399	2133879
AC002040	2347081
AC002064	2076723
AC002086	2085785
AC003991	2772535
AC004022	3598727
AC004130	2842785
AC004223	3253129
AC004456	2979597
AC004499	2996641
AC004507	2996632
AC004656	3253114
AC004706	3176728
AC004816	4156209
AC004982	3419846
AC005004	6624123
AC005037	4827310
AC005154	3242763
AC005383	3818355
AC005480	4835818
AC005538	4508129
AC005831	4165331
AC005880	6249667
AC005881	6382477
AC006057	4731048
AC006153	4309917
AC006257	4092478
AC006285	7109501
AC007052	4510438
AC007239	5523828
AC007275	10801446
AC007279	10440749
AC007686	6466519
AD001528	2198556
AF000152	2454301
AF000231	2149974
AF000364	2697102
AF000381	2565195
AF000652	2795862
AF000982	2580549
AF000983	2580551
AF000984	2580553
AF000986	6007846
AF000994	2580573
AF001212	2150045
AF001433	2529704
AF001542	2529714
AF001893	2529723
AF001902	2078326
AF002210	2431867

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF002668	2232173
AF002697	2311528
AF002715	2352276
AF003341	2183298
AF003837	2228792
AF004162	3046385
AF004327	2257932
AF004561	2209346
AF004813	4877551
AF005038	2232240
AF005043	2213921
AF005050	5302180
AF006043	2674061
AF006083	2282031
AF006085	2282035
AF006086	2282037
AF006088	2282041
AF006514	2645430
AF007135	2852610
AF007142	2852619
AF007144	2852621
AF007149	2852627
AF007151	2852629
AF007216	2281471
AF007217	2253416
AF007217	2253416
AF007791	3779196
AF008442	2266928
AF008443	2266930
AF008915	3093475
AF009615	2393946
AF009620	2429161
AF010233	2895090
AF010235	2707622
AF010244	2612875
AF010312	2415299
AF010313	5468761
AF010315	2415305
AF011904	2282067
AF012072	3967556
AF012073	2735856
AF012126	2832227
AF012281	2944188
AF012549	2317718
AF012872	2326226
AF013160	3540238
AF013168	2331280
AF013717	2992540
AF013758	3046899
AF013759	3153208
AF013970	2801421
AF013998	2318114
AF014955	2772828
AF015040	4102704
AF015293	2384720
AF015553	2415381
AF016266	2529562

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF016270	2655005
AF016369	2708304
AF016371	2708308
AF016496	4102822
AF016509	2338747
AF017256	3642774
AF017269	2394305
AF017305	2656140
AF017445	2582184
AF017688	2435451
AF017714	2435477
AF017748	4102915
AF017782	3986404
AF019214	2460168
AF019226	3406426
AF019632	4699520
AF020038	3641397
AF020202	2431999
AF020351	2655052
AF020591	2843170
AF020736	3450954
AF020761	5733825
AF020768	2460246
AF020797	9256827
AF021336	2541972
AF021351	2460207
AF021819	2460317
AF022108	2736148
AF022212	5731365
AF022215	2583011
AF022229	2809382
AF022913	2558890
AF023244	4103459
AF023259	3746337
AF023676	3211721
AF025684	2589220
AF025840	2697122
AF025998	2570851
AF026166	4090928
AF026169	5091668
AF026246	2587022
AF026247	2587025
AF026291	2559007
AF026292	2559009
AF026939	2612967
AF026977	2583080
AF027302	2522533
AF027515	2772909
AF027824	5669560
AF028593	2599081
AF028832	3287488
AF029669	2909800
AF029689	4545074
AF029890	2745882
AF030162	2599128
AF030234	2822459
AF030310	2613043

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF030403	4103970
AF031647	2688988
AF032456	3004908
AF032885	2895491
AF032922	3820481
AF033026	3378100
AF033095	2645728
AF034091	3834383
AF034174	2707736
AF034176	2707738
AF034209	2724107
AF034607	4426566
AF034759	2653648
AF034795	2853613
AF035268	4090959
AF035285	2661036
AF035286	2661038
AF035293	2661047
AF035295	2661050
AF035296	2661052
AF035298	2661054
AF035309	2661070
AF035316	2661078
AF035319	2661082
AF035537	2665741
AF035812	2665835
AF035839	3098337
AF037447	6466790
AF038172	2795890
AF038175	2795894
AF038187	2795907
AF038404	2707904
AF038440	2773041
AF038451	3779225
AF038452	3779227
AF038952	3329373
AF038955	3329379
AF038957	3329383
AF038960	3329389
AF038962	3329393
AF038963	4405794
AF039023	3064244
AF039029	3834389
AF039081	3135472
AF039632	3170183
AF039703	2789655
AF039918	3335101
AF040250	2827256
AF040707	3688794
AF040958	2773338
AF041259	3335396
AF041260	3335398
AF041493	3493528
AF042166	3298596
AF042181	3688781
AF042234	5256829
AF042331	3882901

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF042346	4104932
AF042384	2828146
AF042385	2828148
AF042386	2828150
AF044195	3757821
AF044321	3170263
AF044588	2865520
AF044670	4191318
AF044671	4105274
AF044953	5326824
AF044954	4164441
AF044956	5326827
AF044957	4164445
AF045167	2865608
AF045184	3417598
AF045229	2906029
AF045583	3372492
AF046001	2895869
AF046785	3219696
AF047020	4204096
AF047185	2909861
AF047436	3335127
AF047440	3335135
AF047442	3335139
AF047470	2906145
AF047472	2921872
AF047489	6288685
AF047599	2906227
AF048731	2981197
AF048977	3005586
AF049910	3435156
AF050171	5668577
AF050637	4164451
AF050638	5326819
AF050641	5326822
AF051321	4091773
AF051323	4091777
AF051334	3126794
AF051941	3893858
AF052093	3360399
AF052097	3360404
AF052107	3360414
AF052113	3360420
AF052124	3360431
AF052129	3360438
AF052138	3360447
AF052149	3360459
AF052153	3360463
AF052154	3360465
AF052159	3360470
AF052164	3360475
AF052175	3360486
AF052180	3360492
AF052182	3360494
AF052183	3360495
AF052187	3360499
AF052578	2967847



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF052642	2981453
AF053070	3095112
AF053470	2982365
AF053535	4007411
AF053551	3283048
AF053641	3560556
AF053970	2996005
AF053977	3283050
AF054175	3341993
AF054179	3341999
AF054181	3342003
AF054182	3342005
AF054183	4092053
AF054186	3342007
AF054187	4092059
AF054284	4033734
AF054838	2997740
AF054987	3005697
AF054988	3005699
AF054990	3005703
AF055008	3005729
AF055012	3005735
AF055022	3005750
AF055025	3005753
AF055033	3005763
AF055470	4321663
AF055473	
AF055474	
AF055994	3319289
AF056087	3033550
AF056322	3252910
AF056433	3044151
AF056617	6002477
AF057160	3694919
AF057299	5739040
AF057705	3047335
AF057706	3047336
AF058319	3789788
AF058718	3808234
AF058953	3766196
AF059524	4091867
AF060152	5725505
AF060219	3789798
AF060515	3746548
AF061258	3108092
AF061261	3773239
AF061737	4335938
AF061739	4335942
AF061938	4335946
AF062318	3152814
AF062323	3152824
AF062725	4731781
AF062729	4731785
AF063521	5080891
AF063657	3132830
AF064084	3135668
AF064257	5881260

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF064484	3211761
AF064491	3372806
AF064768	3551827
AF064769	3551829
AF064819	6137096
AF064859	3171152
AF065388	3152700
AF065391	4191326
AF067008	3873220
AF067170	4894373
AF067171	4894375
AF067396	4138825
AF067656	3901271
AF067972	4927369
AF068117	3201959
AF068180	3406748
AF068235	4321975
AF068302	4584876
AF068754	3283408
AF068846	3201999
AF0690 /3	3202003
AF069301	3193335
AF069469	4106788
AF069601	7239697
AF069762	4995955
AF069765	3243032
AF070523	3764088
AF070525	3387880
AF070539	3387896
AF070548	3387910
AF070553	3387917
AF070554	3387919
AF070555	3387920
AF070556	3387921
AF070561	3387928
AF070562	3387930
AF070595	3387972
AF070596	3387973
AF070597	3387974
AF070600	3387979
AF070618	3283884
AF070621	3283887
AF070626	3283892
AF070641	3283914
AF070646	3283920
AF070649	3283923
AF070650	4454675
AF070651	4454677
AF070652	4454679
AF070655	4454685
AF070657	4454689
AF070658	4454691
AF070659	4454693
AF070660	4454695
AF070661	4454697
AF070664	4454703
AF070665	4454705

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF070668	4454711
AF071076	4545098
AF071172	5107833
AF071202	3335172
AF071593	3249712
AF071748	3916211
AF072371	5305400
AF072810	4049921
AF072847	3283980
AF073298	3641537
AF073299	5305404
AF073310	4511968
AF073475	3293552
AF073887	4406092
AF074016	3328174
AF074506	4091979
AF075061	3377602
AF075587	3319325
AF076929	4836160
AF077029	4689105
AF077030	4689107
AF077032	4689111
AF077034	4689115
AF077035	4689117
AF077037	4689121
AF077042	4689131
AF077043	4689133
AF077045	4689137
AF077200	4679013
AF077202	4679017
AF077367	3820534
AF077599	3342561
AF078845	5531804
AF078847	5531808
AF078848	5531810
AF078849	5531812
AF078854	5531822
AF078855	5531824
AF078858	5531830
AF078859	5531832
AF078860	5531834
AF078861	5531836
AF078862	5531838
AF078863	5531840
AF078864	5531842
AF081192	3420798
AF081259	4558757
AF081281	3415122
AF081282	4336324
AF082513	3649656
AF082657	3415108
AF082858	4557463
AF082868	3746804
AF082889	4249648
AF083106	7555470
AF083107	5225319
AF083190	3599414

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF083217	5639662
AF083395	4106817
AF083441	5813822
AF083470	3719293
AF084260	3514096
AF084457	5257006
AF084555	5813858
AF085224	5817298
AF085243	5901526
AF085355	5114044
AF085359	5114052
AF085362	5114058
AF085844	3483158
AF085845	3483159
AF085850	3483164
AF085858	3483174
AF085871	3483194
AF085893	3483227
AF085896	3483231
AF085917	3483257
AF086002	3483347
AF086003	3483348
AF086168	3483513
AF086172	3483517
AF086179	3483524
AF086182	3483527
AF086183	3483528
AF086218	3483563
AF086236	3483581
AF086245	3483590
AF086251	3483596
AF086336	3483681
AF086351	3483696
AF086401	3483746
AF086418	3483763
AF086431	3483776
AF086449	3483794
AF086472	3483817
AF086477	3483822
AF086495	3483840
AF086517	3483862
AF086557	3483902
AF087020	3851144
AF087438	3820591
AF087481	4322487
AF087573	4926917
AF087942	5814084
AF087980	3523186
AF087999	3523205
AF088004	3523210
AF088035	3523241
AF088055	3523261
AF089747	4165889
AF090327	3643252
AF091071	3859979
AF091073	3859983
AF091076	3859989

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF091083	3860003
AF091084	3860005
AF091089	3860015
AF091090	3860017
AF091263	4140646
AF092038	4588026
AF092092	4426602
AF092133	5138915
AF092134	5138917
AF092135	5138919
AF092138	5138925
AF092565	3661609
AF092905	6010437
AF093097	6002622
AF093118	3676321
AF093668	3907589
AF095687	4028562
AF095770	4588084
AF096773	5852345
AF096774	5852347
AF097159	5305556
AF097514	4808600
AF097535	6165619
AF097725	4323032
AF098297	4160442
AF098533	4050041
AF098865	4204674
AF098951	4038351
AF099137	4566496
AF099149	3930775
AF099989	3851170
AF100615	4808624
AF100741	5138992
AF100742	5138996
AF100744	5410273
AF100749	5410283
AF100755	5410295
AF100756	5410297
AF100757	5410299
AF100759	5410303
AF100761	5410307
AF101044	4877591
AF101051	4323580
AF101074	4249704
AF102265	3851710
AF102846	10257493
AF102850	5281120
AF102988	5305593
AF103720	4324281
AF103774	6179867
AF103801	6048969
AF103804	6048975
AF103907	6165973
AF103908	6165974
AF104012	4406226
AF104013	4406228
AF104252	4220891

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF104914	4206125
AF106681	5410327
AF106862	5757883
AF106943	4454994
AF107405	5531903
AF108092	4691548
AF109213	4206154
AF110377	4151928
AF110643	5730475
AF110647	5730483
AF111106	4191593
AF111713	5326796
AF112152	5305672
AF112227	4545218
AF112481	4959395
AF112972	4151943
AF113131	4455014
AF113132	5326801
AF113140	4512029
AF114027	5649915
AF114471	4378758
AF114816	5059036
AF114817	5059038
AF115402	4559272
AF116827	4768830
AF117754	4530436
AF117756	4530440
AF117949	4959424
AF118124	4235636
AF118838	5052318
AF119121	6724278
AF119297	4633508
AF124141	4757578
AF124438	4838431
AF124439	4838433
AF124440	4877758
AF124598	4884701
AF125096	5106987
AF125097	5106989
AF125100	5106995
AF125392	5410354
AF125393	5410356
AF126008	4469557
AF126181	4732088
AF126245	6465954
AF126424	4325326
AF126736	4454564
AF126780	6318543
AF126782	6318547
AF128406	5777951
AF128527	4928043
AF128528	4928045
AF129927	4558506
AF131220	4589247
AF131738	4406548
AF131743	4406555
AF131749	4406565

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF131758	4406576
AF131763	4406585
AF131774	4406598
AF131775	4406599
AF131784	4406612
AF131792	4406620
AF131802	4406633
AF131814	4406648
AF131831	4406669
AF131838	4406677
AF131844	4406685
AF131856	4406702
AF131857	4406704
AF132000	4530586
AF132937	4680644
AF132940	4680650
AF132941	4680652
AF132945	4680660
AF132956	4680682
AF132965	4680700
AF132968	4680706
AF133123	5281313
AF133845	4884871
AF134159	5870835
AF135421	5052350
AF135488	5668619
AF136450	4835894
AF137334	4583504
AF138300	5532410
AF139461	4894945
AF140598	4769003
AF141327	4769007
AF141968	6273777
AF143235	6449465
AF143886	4895031
AF144103	5059165
AF144566	4809247
AF144755	5006628
AF145029	5052413
AF145316	4929324
AF146277	4960046
AF147330	4761681
AF147331	4761682
AF147334	4761685
AF147339	4761690
AF147354	4761705
AF147367	4761718
AF147380	4761731
AF147395	4761746
AF149045	6010479
AF150087	5107162
AF150105	5107197
AF150208	5133644
AF151103	5758136
AF151105	5739542
AF151109	6166337
AF151793	6424941

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF151800	4929552
AF151803	4929558
AF151805	4929562
AF151818	4929588
AF151820	4929592
AF151823	4929598
AF151830	4929612
AF151836	4929624
AF151837	4929626
AF151840	4929632
AF151844	4929640
AF151846	4929644
AF151851	4929654
AF151855	4929662
AF151859	4929670
AF151861	4929674
AF151867	4929686
AF151868	4929688
AF151870	4929692
AF151871	4929694
AF151873	4929698
AF151875	4929702
AF151878	4929708
AF151884	4929720
AF151893	4929738
AF151896	4929744
AF151897	4929746
AF151902	4929756
AF151903	4929758
AF151906	4929764
AF151908	4929768
AF152097	4929772
AF152306	5456897
AF153191	7145110
AF153201	5020361
AF153603	5231130
AF153608	5231140
AF153612	4929830
AF155095	5360084
AF155099	5360092
AF155100	5360094
AF155110	5360114
AF155113	5360120
AF155235	6318598
AF155330	5107389
AF155568	5031511
AF155832	6288768
AF156098	5070697
AF156965	5731112
AF156972	5361367
AF157028	5533002
AF159056	5566238
AF159092	9055139
AF159295	5714635
AF159615	6466003
AF165281	5734100
AF167160	5733691



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AF167572	6164703
AF168956	5702387
AF169481	6272653
AF169797	6118085
AF170583	6318677
AF170703	6373867
AF171877	6002954
AF171944	5302476
AF174595	6164732
AF174605	6164752
AF176555	6318854
AF176574	5762481
AF176642	6935100
AF176700	6103638
AF176702	6103642
AF177291	5882256
AF177775	5823471
AF178030	6539738
AF179274	5911402
AF182289	5919146
AF182645	5901877
AF188298	6176335
AF188745	6425043
AF188746	6425045
AF188747	6425047
AF190167	6456117
AF191013	6457339
AF191020	6457343
AF191298	7656642
AF191339	6180012
AF192979	6409378
AF193795	6164954
AF195120	6110609
AF195417	6118554
AF198358	6466185
AF201077	6456748
AI000271	3190825
AI000294	3190848
AI000502	3191056
AI000877	3191431
AI001862	3202333
AI002321	3202655
AI002745	3203159
AI002821	3203235
AI003028	3203442
AI003625	3203959
AI003636	3203970
AI003778	3213288
AI003782	3213292
AI003893	3213403
AI004135	3213645
AI004169	3213679
AI004252	3213762
AI004315	3213825
AI004596	3214106
AI004916	3214426
AI004930	3214440

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI005274	3214784
AI005321	3214831
AI005449	3214959
AI005515	3215025
AI005519	3215029
AI005521	3215031
AI014387	3228768
AI014704	3229085
AI015053	3229389
AI015196	3229532
AI015245	3229581
AI015359	3229695
AI015574	3229910
AI015589	3229925
AI015679	3230015
AI015790	3230126
AI016031	3230367
AI016074	3230410
AI016106	3230442
AI016113	3230449
AI016162	3230498
AI016169	3230505
AI016417	3230753
AI016618	3230954
AI016688	3231024
AI016700	3231036
AI017022	3231358
AI017236	3231572
AI017239	3231575
AI017240	3231576
AI017332	3231668
AI017442	3231778
AI017607	3231943
AI017703	3232039
AI017779	3232115
AI017809	3232145
AI017959	3232295
AI017996	3232332
AI018034	3232370
AI018161	3232680
AI018468	3232987
AI018578	3233097
AI018613	3233132
AI018617	3233136
AI018625	3233144
AI018686	3232484
AI018728	3232526
AI018773	3232571
AI021925	3237538
AI022058	3239411
AI022134	3239487
AI022340	3237581
AI022353	3237594
AI022687	3237928
AI022855	3238096
AI023483	3238527
AI023724	3238768

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI023770	3238814
AI023931	3238975
AI024401	3240014
AI024549	3240162
AI024638	3240251
AI024799	3240412
AI024907	3240520
AI025015	3240628
AI025120	3240733
AI025126	3240739
AI025259	3240872
AI025262	3240875
AI025376	3240989
AI025419	3241032
AI025519	3241132
AI026122	3241735
AI026767	3246255
AI026819	3246307
AI027232	3244748
AI027516	3246446
AI027536	3246466
AI027643	3245082
AI027887	3246586
AI028097	3245406
AI028107	3245416
AI028122	3245431
AI028507	3245816
AI028516	3245825
AI028708	3246017
AI031653	3249865
AI031665	3249877
AI031819	3250031
AI031392	3250604
AI032401	3250613
AI032759	3253456
AI032779	3253476
AI032838	3253535
AI033863	3254816
AI033904	3254857
AI033912	3254865
AI034024	3254977
AI034131	3255084
AI034431	3255384
AI038038	3277232
AI038048	3277242
AI038157	3277361
AI038415	3277609
AI038692	3277886
AI038986	3278180
AI039000	3278394
AI039227	3278421
AI039271	3278465
AI039301	3278495
AI039433	3278627
AI039636	3278830
AI039804	3278998
AI039813	3279007

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI040234	3279428
AI040339	3279533
AI040598	3279792
AI041116	3280310
AI041150	3280344
AI041497	3280691
AI041616	3280810
AI041630	3280824
AI041820	3281014
AI041847	3281041
AI042002	3281196
AI042059	3281253
AI042066	3281260
AI042152	3281346
AI042153	3281347
AI042290	3281484
AI042293	3281487
AI042354	3281548
AI042406	3281600
AI049971	3299088
AI049995	3299112
AI050826	3307631
AI050871	3307676
AI050872	3307677
AI050966	3307771
AI051210	3306744
AI051376	3306910
AI051957	3307948
AI051959	3307950
AI051983	3307974
AI051987	3307978
AI051994	3307985
AI052061	3308052
AI052112	3308103
AI052124	3308115
AI052126	3308117
AI052333	3308324
AI052453	3308444
AI052525	3308516
AI052724	3308715
AI052738	3308729
AI053597	3321384
AI053744	3321531
AI054023	3321810
AI054344	3322131
AI055870	3329736
AI055939	3329805
AI056489	3330355
AI056927	3330716
AI057093	3330969
AI057142	3331008
AI057281	3331147
AI057555	3331421
AI057585	3331451
AI057617	3331483
AI061116	3336484
AI061420	3336788

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI061610	6358907
AI061649	6358946
AI064691	6358963
AI064763	6359035
AI064844	6359116
AI064931	6359203
AI064967	6359239
AI065092	6359364
AI065140	6359412
AI065152	6359424
AI066442	3367144
AI066518	3367220
AI066753	3367039
AI073465	3400109
AI073907	3400551
AI074107	3400751
AI074143	3400787
AI074232	3400876
AI074308	3400952
AI074389	3401033
AI074397	3401041
AI074613	3401257
AI074652	3401296
AI074713	3401357
AI074969	3401613
AI075037	3401681
AI075041	3401685
AI075189	3401780
AI075211	3401802
AI075324	3399895
AI075338	3399909
AI075631	3404809
AI075893	3405071
AI075935	3405113
AI075963	3405141
AI076042	3405220
AI076593	3405771
AI076608	3405786
AI077317	3411725
AI077439	3411847
AI077498	3411896
AI077500	3411908
AI077641	3412049
AI077719	3412127
AI078217	3412625
AI078381	3412789
AI078772	3413079
AI078802	3413109
AI079329	3413580
AI079558	3413809
AI079595	3413846
AI079882	3415133
AI080170	3415421
AI080267	3415518
AI080272	3415523
AI080377	3415628
AI080439	3415690

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI080476	3416727
AI080480	3416731
AI080485	3416736
AI081133	3417925
AI081291	3418083
AI081379	3418171
AI081842	3418634
AI081918	3418710
AI081945	3418737
AI082168	3418960
AI082235	3419027
AI082272	3419064
AI082307	3419099
AI082617	3419409
AI082674	3419466
AI082864	3417840
AI083814	3422255
AI084005	3422428
AI084100	3422523
AI084101	3422524
AI084457	3422880
AI084466	3422889
AI084604	3423027
AI084651	3423074
AI084916	3423339
AI085165	3423588
AI085195	3423618
AI085263	3423686
AI085381	3423804
AI085393	3423816
AI085554	3423977
AI085559	3423982
AI085977	3424400
AI086059	3424482
AI086377	3424800
AI087077	3425500
AI087080	3425503
AI087145	3425568
AI087287	3425710
AI087300	3425723
AI087412	3425835
AI087888	3426921
AI087987	3427020
AI088178	3427256
AI088201	3427279
AI088633	3427692
AI088691	3427750
AI088778	3427837
AI088914	3427973
AI089394	3428453
AI089431	3428490
AI089525	3428584
AI089526	3428585
AI089875	3428934
AI089923	3428982
AI089948	3429007
AI090012	3429071

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI090225	3429285
AI090223	3429682
AI090242	3429701
AI090785	3429845
AI090819	3429868
AI090927	3429886
AI091136	3430195
AI091190	3430249
AI091425	3430484
AI091516	3430575
AI091736	3430795
AI091814	3430873
AI091935	3430994
AI092428	3431404
AI092479	3431455
AI092766	3431742
AI093233	3432209
AI093387	3432363
AI093409	3432385
AI093458	3432434
AI093553	3432529
AI093823	3432799
AI094010	3432986
AI094162	3433138
AI094394	3433370
AI094634	3433610
AI094741	3433717
AI094803	3433779
AI095031	3434007
AI095250	3434226
AI095875	3434851
AI096410	3446321
AI096493	3445987
AI096706	3446200
AI097214	3446796
AI097410	3446992
AI097545	3447127
AI110768	6359630
AI110838	6359699
AI110858	6359719
AI110866	6359729
AI114433	6359778
AI114467	6359812
AI114489	6359834
AI114602	6359947
AI114631	6359976
AI114651	6359996
AI123199	3538965
AI123229	3538995
AI123347	3539113
AI123672	3539438
AI123822	3539588
AI123916	3539682
AI124832	3593046
AI124886	3593370
AI125166	3593680
AI125407	3594121

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI125642	3594156
AI125653	3594167
AI125688	3594202
AI126093	3594607
AI126233	3594747
AI126257	3594771
AI126653	3595167
AI126700	3595214
AI126867	3595381
AI127167	3595681
AI127176	3595690
AI127239	3595753
AI127268	3595782
AI127424	3595938
AI127455	3595969
AI127526	3596040
AI127556	3596070
AI127923	3596437
AI128091	3596605
AI128828	3597342
AI128883	3597397
AI128918	3597432
AI128949	3597463
AI128986	3597500
AI129280	3597782
AI129321	3597835
AI129342	3597856
AI129403	3597917
AI129714	3598228
AI129800	3598314
AI129891	3598405
AI129932	3598446
AI129991	3598505
AI130796	3600812
AI131097	3601113
AI131216	3601232
AI131444	3601460
AI133096	6360412
AI133138	6360454
AI133152	6360468
AI133208	6360524
AI133247	6360563
AI133330	6360646
AI133381	6360697
AI133387	6360703
AI133402	6360718
AI133406	6360722
AI133466	6360782
AI133562	6360878
AI133612	6360928
AI133668	6360984
AI133690	6361006
AI133727	3602925
AI138629	3644601
AI138633	3644605
AI138640	3644612
AI139036	3645008



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI139157	3645129
AI139200	3645172
AI139394	3645366
AI139904	3645876
AI140096	3647553
AI140210	3647667
AI140251	3647708
AI140421	3647878
AI140793	3648250
AI140921	3648378
AI141040	3648497
AI141189	3648546
AI141483	3648940
AI141583	3649040
AI141732	3649139
AI141770	3649227
AI141847	3649304
AI142021	3649478
AI142083	3649540
AI142095	3649552
AI142257	3658616
AI142558	3658917
AI143199	3665008
AI143623	3665432
AI143746	3665555
AI143775	3665584
AI143899	3665708
AI144216	3666025
AI144378	3666187
AI144423	3666232
AI144488	3666297
AI146340	3674022
AI146476	3674158
AI146478	3674160
AI147191	3674873
AI147472	3675154
AI147850	3675532
AI148115	3675797
AI148251	3675933
AI148392	3676861
AI148437	3676906
AI148552	3677021
AI148561	3677030
AI148676	3677145
AI148933	3677402
AI149363	3677832
AI149592	3678061
AI149743	3678212
AI150619	3679088
AI151140	3679609
AI151458	3679927
AI151482	3679951
AI151497	3679966
AI159768	3693127
AI160324	3693704
AI160426	3693806
AI161068	3694373

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI161253	3692941
AI161261	3692949
AI161272	3692960
AI161333	3694577
AI161350	3694594
AI167330	3700500
AI167651	3700821
AI167801	3700971
AI168205	3701375
AI174394	3721247
AI174675	6361053
AI174822	6361214
AI174828	6361222
AI174853	6361253
AI174867	6361268
AI174899	6361302
AI174957	6361365
AI174991	6361399
AI183358	3733996
AI183447	3734085
AI183745	3734383
AI183897	3734535
AI184113	3734751
AI184320	3734958
AI184562	3735200
AI184748	3735386
AI184994	3735632
AI186545	3737183
AI186597	3737235
AI188073	3739287
AI188081	3739290
AI188563	3739772
AI188641	3739850
AI188794	3740003
AI188850	3740059
AI189173	3740382
AI189339	3740548
AI189340	3740549
AI189345	3740554
AI189386	3740595
AI189841	3741050
AI189894	3741103
AI189897	3741106
AI190480	3741689
AI190648	3741857
AI190785	3741994
AI191244	3742453
AI192767	3743976
AI192780	3743989
AI192784	3743993
AI192932	3744141
AI193675	3744872
AI197946	3750552
AI198311	3750917
AI198317	3750923
AI198416	3751022
AI198577	3751183

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI198625	3751231
AI198771	3751377
AI198833	3751459
AI198859	3751465
AI198930	3751536
AI198937	3751543
AI198986	3751592
AI199094	3751700
AI199544	3752150
AI199641	3752247
AI199681	3752287
AI199773	3752379
AI200038	3752644
AI200110	3752716
AI200245	3752851
AI200324	3752930
AI200444	3753050
AI200578	3753184
AI200798	3753404
AI200830	3753436
AI201248	3753854
AI201261	3753867
AI201294	3753900
AI201298	3753904
AI201483	3754089
AI201484	3754090
AI201564	3754170
AI202026	3754632
AI203141	3755747
AI203350	3755956
AI203377	3755983
AI203395	3756001
AI203546	3756152
AI204090	3756696
AI204096	3756702
AI204308	3756914
AI204916	3757978
AI205223	3758290
AI205868	3764540
AI206063	3764735
AI206199	3764871
AI206223	3764895
AI206344	3765016
AI206483	3765155
AI206818	3765490
AI207367	3766039
AI207515	6361523
AI207523	6361536
AI207546	6361554
AI207570	6361578
AI207613	6361632
AI207623	6361642
AI207650	6361664
AI207660	6361674
AI207781	3769723
AI208430	3770372
AI208947	3770889

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI214043	3777644
AI214048	3777649
AI214050	3777651
AI214054	3777655
AI214272	3777873
AI214784	3778385
AI215841	3784882
AI216138	3785179
AI216358	3785399
AI216966	3789620
AI216968	3789622
AI216969	3789623
AI216971	3789625
AI216972	3789626
AI216979	3789633
AI216984	3789638
AI216986	3789640
AI216988	3789642
AI217003	3789657
AI217009	3789663
AI217012	3789666
AI217015	3789669
AI217019	3789673
AI217021	3789675
AI217023	3789677
AI217172	3796987
AI217425	3797240
AI217557	3797372
AI217694	3797509
AI217964	3797779
AI218376	3798191
AI218882	3801085
AI219116	3801319
AI219174	3801377
AI219278	3801481
AI219324	3801527
AI219570	3801773
AI219803	3802006
AI220051	3802254
AI220149	3802352
AI220151	3802354
AI221390	3803593
AI221713	3803916
AI221829	3804032
AI221894	3804097
AI222329	3804532
AI222506	3804709
AI222789	3804992
AI222806	3805009
AI223061	3805264
AI223085	3805288
AI224519	3807232
AI225043	3807756
AI239435	3834832
AI239506	3834903
AI239822	3835219
AI240543	3835940

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI240372	3836269
AI240399	3836296
AI241117	3836514
AI241212	3836609
AI241659	3837056
AI241744	3837141
AI241893	3837290
AI242701	3838098
AI242761	3838158
AI243343	3838740
AI243423	3838820
AI243780	3839177
AI243841	3839238
AI244140	3839537
AI244217	3839614
AI244335	3839732
AI245297	3840694
AI245327	3840724
AI246167	3841564
AI246173	3841570
AI246383	3841780
AI246497	3841894
AI246615	3842012
AI247078	3842475
AI248187	3843584
AI248277	3843674
AI248514	3843911
AI248721	3844118
AI248736	3844133
AI249000	3844397
AI249257	3845786
AI249680	3846209
AI249764	3846293
AI249797	3846326
AI249866	3846395
AI249877	3846406
AI250055	3846584
AI250092	3846621
AI252084	3848613
AI252283	3848812
AI252562	3849091
AI253099	3849628
AI253192	3849721
AI253288	3850409
AI253293	3850414
AI253300	3850421
AI253304	3850425
AI253319	3850440
AI253330	3850451
AI253335	3850456
AI253338	3850459
AI253345	3850466
AI253347	3850468
AI253348	3850469
AI253363	3850484
AI253367	3850488
AI253379	3850500

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI253381	3850502
AI253395	3850350
AI253424	3850379
AI253436	3850391
AI261763	3869966
AI261883	3870086
AI261899	3870102
AI262104	3870307
AI262139	3870342
AI262460	3870663
AI262486	3870689
AI263110	3871313
AI263731	3871934
AI263876	3872079
AI265776	3883934
AI265881	3884039
AI266043	3884201
AI266643	3884801
AI267158	3886325
AI267162	3886329
AI267185	3886352
AI267216	3886383
AI267254	3886421
AI267255	3886422
AI267256	3886423
AI267257	3886424
AI267271	3886438
AI267276	3886443
AI267282	3886449
AI267285	3886452
AI267307	3886474
AI267321	3886488
AI267335	3886502
AI267353	3886520
AI267384	3886551
AI267397	3886564
AI267416	3886583
AI267417	3886584
AI267442	3886609
AI267454	3886621
AI267461	3886628
AI267480	3886647
AI267490	3886657
AI267492	3886659
AI267502	3886669
AI267519	3886686
AI267522	3886689
AI267554	3886721
AI267570	3886737
AI267574	3886741
AI267596	3886763
AI267612	3886779
AI267652	3886819
AI267656	3886823
AI267664	3886831
AI267669	3886836
AI267677	3886844

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI267308	3886975
AI267338	3887005
AI267345	3887012
AI267349	3887016
AI267941	3887108
AI268328	3887495
AI268362	3887529
AI268405	3887572
AI268430	3887597
AI268724	3887891
AI268860	3888027
AI269053	3888220
AI269060	3888227
AI269158	3888325
AI269205	3888372
AI269415	3888582
AI269747	3888914
AI269883	3889050
AI270511	3889678
AI270536	3889703
AI271269	3890436
AI271740	3890907
AI272941	3895209
AI273636	3895904
AI273945	3896213
AI274700	3896974
AI274786	3897060
AI275114	3897383
AI275175	3897449
AI275711	3897985
AI275792	3898066
AI276322	3898596
AI276341	3898615
AI276399	3898673
AI276576	3898850
AI276662	3898936
AI276705	3898979
AI277434	3899702
AI277739	3900007
AI278014	3900282
AI278611	3916845
AI278643	3916877
AI278659	3916893
AI278838	3917072
AI279141	3917375
AI279838	3918072
AI279882	3918116
AI280561	3918794
AI280637	3918870
AI280935	3919168
AI281196	3919429
AI281449	3919682
AI281509	3919740
AI281762	3919995
AI281777	3920010
AI281882	3920115
AI281926	3920159

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI281946	3920179
AI282277	3920510
AI282318	3920551
AI283096	3921329
AI283385	3921618
AI283489	3921722
AI284011	3922244
AI284549	3922782
AI284667	3922900
AI285408	3923641
AI285435	3923668
AI285488	3923721
AI287603	3927356
AI287972	3927725
AI288142	3930919
AI288388	3931068
AI288730	3932233
AI288929	3931238
AI289059	3931368
AI289111	3932375
AI289120	3932384
AI289220	3932484
AI289278	3932542
AI290658	3933432
AI290826	3933600
AI291206	3933969
AI291247	3934021
AI291296	3934070
AI291583	3934357
AI292299	3935073
AI298059	3957795
AI298459	3958195
AI298496	3958232
AI298716	3958452
AI298972	3958626
AI299524	3959109
AI299945	3959291
AI300489	3959835
AI300532	3959878
AI300553	3959899
AI300562	3959908
AI301532	3960878
AI301933	3961279
AI302083	3961429
AI302102	3961448
AI302137	3961483
AI302526	3961872
AI302799	3962145
AI304935	3988624
AI304947	3988636
AI305530	3990421
AI305838	3988967
AI306421	3989492
AI306457	3989528
AI306464	3989535
AI307302	4002027
AI307402	4002127



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI307419	4002144
AI307515	4002240
AI307634	4001847
AI308070	4002707
AI308300	4003671
AI309025	4003896
AI309121	4003992
AI309238	4004109
AI309401	4004272
AI309545	4004714
AI310138	4005009
AI310235	4005106
AI310465	4005336
AI310561	4005355
AI312049	4017654
AI312130	4017735
AI312325	4017930
AI312541	4018147
AI312552	4018157
AI312562	4018167
AI313351	4018957
AI313357	4018992
AI318091	4033872
AI318280	4034139
AI332459	4069018
AI332588	4069147
AI332597	4069156
AI332698	4069257
AI332712	4069271
AI332804	4069463
AI332839	4069498
AI333116	4069675
AI333548	4070107
AI334333	4071760
AI334964	4071891
AI334996	4071923
AI335028	4071955
AI335153	4072080
AI335178	4072105
AI335269	4072196
AI335554	4072481
AI335829	4072756
AI336147	4073074
AI336306	4073253
AI336501	4073428
AI336500	4073727
AI336949	4073876
AI338190	4075117
AI338222	4075149
AI338335	4075262
AI338338	4075265
AI338379	4075306
AI338603	4075530
AI338817	4075744
AI339354	4076281
AI339458	4076385
AI340044	4076971

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI340246	4077173
AI340533	4077460
AI340582	4077509
AI340611	4077538
AI340627	4077554
AI340981	4077908
AI341076	4078003
AI341334	4078261
AI341352	4078279
AI341551	4078478
AI341700	4078627
AI341972	4078899
AI342269	4079196
AI342409	4079336
AI342468	4079395
AI342546	4079473
AI342669	4079875
AI342937	4080143
AI343091	4080297
AI343112	4080318
AI343367	4080573
AI343404	4080610
AI343604	4080810
AI343692	4080898
AI345347	4082553
AI345370	4082576
AI345416	4082622
AI345478	4082684
AI346021	4083227
AI346381	4083587
AI346657	4083863
AI346809	4084015
AI347155	4084361
AI347461	4084667
AI347473	4084679
AI347506	4084712
AI348579	4085785
AI349099	4086305
AI349256	4086462
AI349452	4086658
AI349937	4087143
AI350388	4087594
AI351045	4088251
AI351780	4088986
AI352032	4089238
AI352141	4089347
AI355050	4095203
AI356309	4107930
AI356718	4108339
AI356805	4108426
AI356967	4108577
AI357346	4108967
AI357472	4109093
AI357642	4109263
AI357779	4109400
AI358685	4110306
AI358723	4110344

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI359849	4111470
AI360123	4111744
AI360165	4111786
AI360451	4112072
AI360710	4112331
AI360870	4112491
AI361119	4112740
AI361256	4112877
AI361377	4112998
AI361305	4113526
AI361365	4113585
AI361369	4113590
AI362403	4114024
AI362462	4114083
AI362490	4114111
AI363118	4114739
AI364053	4123742
AI364592	4124281
AI364592	4124281
AI365603	4125292
AI365603	4125292
AI365612	4125301
AI365612	4125301
AI366365	4126054
AI366365	4126054
AI366374	4126063
AI366376	4126065
AI366376	4126065
AI366380	4126069
AI366380	4126069
AI366381	4126070
AI366459	4126148
AI366459	4126148
AI366461	4126150
AI366467	4126156
AI366467	4126156
AI366471	4126160
AI366549	4126238
AI366549	4126238
AI367350	4137095
AI367641	4137386
AI367730	4137475
AI367759	4137504
AI368048	4137793
AI368114	4137859
AI368664	4147417
AI368743	4147496
AI369174	4147927
AI369849	4148602
AI370846	4149599
AI371832	4150585
AI372599	4152465
AI373120	4152986
AI373289	4153155
AI373323	4153189
AI373544	4153410
AI373565	4153431

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI373634	4153500
AI374623	4174618
AI374643	4174633
AI374954	4174944
AI374954	4174944
AI375141	4175131
AI375141	4175131
AI375465	4175455
AI375465	4175455
AI375751	4175741
AI375751	4175741
AI375919	4175909
AI375919	4175909
AI376513	4186362
AI376808	4186661
AI376840	4186693
AI376865	4186718
AI377012	4186865
AI377194	4187047
AI378290	4188143
AI378613	4188466
AI378631	4188484
AI378902	4188755
AI378932	4188785
AI379402	4189255
AI379597	4189450
AI379679	4189532
AI380537	4190390
AI380706	4190559
AI380812	4190665
AI380842	4190695
AI380932	4190785
AI381351	4194132
AI381649	4194430
AI381996	4194777
AI382020	4194801
AI382065	4194846
AI382189	4194959
AI382980	4195761
AI383637	4196418
AI383945	4196726
AI391501	4217505
AI391631	4217635
AI391717	4217721
AI392607	4222154
AI394173	4223720
AI394364	4223911
AI394420	4223967
AI394469	4224016
AI394498	4224045
AI394646	4224193
AI399717	4242804
AI400282	4243369
AI400410	4243497
AI400511	4243598
AI400752	4243839
AI401150	4244237

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI401220	4244307
AI401513	4244600
AI401771	4244858
AI401840	4244927
AI417016	4260520
AI417131	4260635
AI417562	4261066
AI417833	4261337
AI417910	4261414
AI420026	4265957
AI420172	4266103
AI420227	4266158
AI420373	4266304
AI420898	4266829
AI421027	4266958
AI421249	4267180
AI421290	4267221
AI421401	4267332
AI421412	4267343
AI421741	4267672
AI421761	4267692
AI422143	4268174
AI422907	4268838
AI423180	4269111
AI423541	4269472
AI431327	4302410
AI431350	4302571
AI431675	4304843
AI431801	4305724
AI431814	4305815
AI431869	4306201
AI431923	4306579
AI432306	4309261
AI432462	4281890
AI432603	4283019
AI432969	4285894
AI433717	4291133
AI433757	4291414
AI433818	4291841
AI433976	4292947
AI434025	4293290
AI434109	4293878
AI434150	4294165
AI434180	4294375
AI434250	4294864
AI434639	4297586
AI434949	4299755
AI435153	4301196
AI435349	4302561
AI435606	4304362
AI435945	4306732
AI436714	4283904
AI439173	4302469
AI439248	4302993
AI439452	4304421
AI439762	4306588
AI439774	4306672

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI439987	4308001
AI440088	4308710
AI440194	4309452
AI440238	4281227
AI445471	4288444
AI445592	4289290
AI446003	4292165
AI446249	4293887
AI446426	4295127
AI452485	4307457
AI452703	4287210
AI452707	4287238
AI453181	4308561
AI453358	4281271
AI453402	4281623
AI453477	4282222
AI457107	4309976
AI457157	4310026
AI457216	4310085
AI457410	4310279
AI457964	4311982
AI458457	4311036
AI458521	4311100
AI458673	4311252
AI458743	4311322
AI458799	4311378
AI458823	4311402
AI459234	4311813
AI459667	4312548
AI460230	4313111
AI467858	4329948
AI467861	4329951
AI468347	4330437
AI469038	4331128
AI469767	4331857
AI470061	4332151
AI470259	4332349
AI471561	4333651
AI472067	4334157
AI472525	4325570
AI472566	4325611
AI473310	4326355
AI473779	4326824
AI474125	4327170
AI474235	4327280
AI474466	4327511
AI474750	4327795
AI475476	4328521
AI475810	4328855
AI476075	4329120
AI476254	4329299
AI476310	4329355
AI476313	4329363
AI478365	4371591
AI479009	4372177
AI479021	4372189
AI479439	4372607

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI479948	4373116
AI480214	4373382
AI480345	4373513
AI480424	4373592
AI491775	4392778
AI492263	4393266
AI492953	4393956
AI493851	4394854
AI493961	4394964
AI494299	4395302
AI497636	4389618
AI497759	4389741
AI499331	4391313
AI499378	4391360
AI499393	4391375
AI499439	4391421
AI499516	4391498
AI499584	4391566
AI499933	4391915
AI499986	4391968
AI500531	4392513
AI501100	4435235
AI501156	4435291
AI501270	4435405
AI501964	4436099
AI501984	4436119
AI503222	4437357
AI503506	4437641
AI503940	4438075
AI503964	4438099
AI504304	4438439
AI504414	4438549
AI504826	4438961
AI504874	4439009
AI504991	4439126
AI505102	4439237
AI505231	4439366
AI505426	4439561
AI505454	4439589
AI505552	4439687
AI505651	4439786
AI505654	4439789
AI505702	4439837
AI505773	4439908
AI505843	4439978
AI536024	4450159
AI536588	4450723
AI536685	4450820
AI536833	4450968
AI536991	4451126
AI537244	4451379
AI537498	4451633
AI538342	4452477
AI538631	4452816
AI539349	4453484
AI546840	4464328
AI547041	4464529

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI547068	4464556
AI547090	4464578
AI547125	4464613
AI547146	4464634
AI547284	4464772
AI547285	4464773
AI547309	4464797
AI547327	4464815
AI553845	4486208
AI554016	4486379
AI554590	4486953
AI554809	4487172
AI557053	4489416
AI557059	4489422
AI557082	4489445
AI557112	4489475
AI557116	4489479
AI557118	4489481
AI557182	4489545
AI557225	4489588
AI557226	4489589
AI557231	4489594
AI557235	4489598
AI557237	4489600
AI557243	4489606
AI557246	4489609
AI557269	4489632
AI557277	4489640
AI557336	4489699
AI557338	4489701
AI557363	4489726
AI557452	4489815
AI557458	4489821
AI557495	4489858
AI557599	4489962
AI557626	4489989
AI557639	4490002
AI559299	4509504
AI559680	4509885
AI559903	4510108
AI559999	4510204
AI560184	4510525
AI560756	4511097
AI560870	4511211
AI560958	4511299
AI561122	4511463
AI563921	4522378
AI564173	4522630
AI564269	4522726
AI564475	4522932
AI564487	4522944
AI564506	4522963
AI564822	4523279
AI565591	4524048
AI566084	4524536
AI566490	4524942
AI567102	4525554



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI569556	4532930
AI569819	4533193
AI569953	4533329
AI570128	4533502
AI570141	4533515
AI570221	4533595
AI570349	4533723
AI570521	4533895
AI570611	4533985
AI570859	4534233
AI570942	4534316
AI571069	4534443
AI571418	4534792
AI571517	4534891
AI571730	4535104
AI572096	4535470
AI573140	4536514
AI573212	4536586
AI573218	4536592
AI580160	4564536
AI580162	4564538
AI580176	4564552
AI580927	4565303
AI581840	4567737
AI582365	4568262
AI582912	4568809
AI583257	4569154
AI587118	4573559
AI587300	4573741
AI587642	4574083
AI588087	4597134
AI588866	4597914
AI589075	4598123
AI589206	4598254
AI589285	4598333
AI589476	4598524
AI589533	4598581
AI589633	4598681
AI589756	4598804
AI590195	4599243
AI590351	4599399
AI590878	4599926
AI591088	4600136
AI597980	4607028
AI598180	4607228
AI608684	4617951
AI608968	4618135
AI609659	4618826
AI610412	4619579
AI610699	4619866
AI610920	4620087
AI611738	4620905
AI612873	4622040
AI613093	4622260
AI619498	4628624
AI619798	4628924
AI620111	4629237

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI620284	4629410
AI620427	4629553
AI620673	4629799
AI620796	4629922
AI620924	4630050
AI621153	4630279
AI623176	4648101
AI623315	4648240
AI623804	4648735
AI623891	4648822
AI623924	4648855
AI623984	4648915
AI624249	4649180
AI624441	4649372
AI624709	4649640
AI625201	4650132
AI625204	4650135
AI625404	4650335
AI625747	4650678
AI625864	4650795
AI627356	4664156
AI627542	4664342
AI627553	4664353
AI627750	4664550
AI627818	4664618
AI627945	4664745
AI628389	4665189
AI628609	4665409
AI628885	4665685
AI630104	4681434
AI630118	4681448
AI630144	4681474
AI630188	4681518
AI630228	4681558
AI630282	4681612
AI630306	4681636
AI630345	4681675
AI630357	4681687
AI630362	4681692
AI630584	4681914
AI630616	4681946
AI630634	4681964
AI630685	4682015
AI630891	4682221
AI630985	4682315
AI631703	4683033
AI631745	4683075
AI632108	4683438
AI632244	4683574
AI632523	4683853
AI632534	4683864
AI633646	4684976
AI634228	4685558
AI634702	4686032
AI634740	4686070
AI635096	4686426
AI635209	4686539

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI635275	4686605
AI635310	4686640
AI635473	4686808
AI635653	4686988
AI635667	4686997
AI635681	4687011
AI636577	4687907
AI636626	4687956
AI636628	4687958
AI636701	4688031
AI636899	4688229
AI636911	4688241
AI636943	4688273
AI637534	4689318
AI638327	4690561
AI638414	4690648
AI638432	4690726
AI640538	4703697
AI648632	4729516
AI648634	4729518
AI650721	4734700
AI651069	4735048
AI651195	4735174
AI651974	4735953
AI651976	4735955
AI652084	4736063
AI652112	4736091
AI652555	4736534
AI653319	4737298
AI653367	4737346
AI653541	4737520
AI653621	4737600
AI654122	4739101
AI654123	4738102
AI654183	4738162
AI654284	4738263
AI654454	4738433
AI655189	4739168
AI656122	4740101
AI656158	4740137
AI656323	4740302
AI656402	4740381
AI658689	4762259
AI658350	4762420
AI659354	4762924
AI659386	4762956
AI659440	4763010
AI659898	4763468
AI660243	4763813
AI660356	4763926
AI660606	4764189
AI660919	4764502
AI669052	4833826
AI669210	4833984
AI669253	4834027
AI669704	4834473
AI670002	4834776

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<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI670009	4834783
AI670913	4850644
AI671180	4850911
AI671394	4851125
AI671555	4851286
AI671642	4851373
AI672201	4851932
AI672362	4852093
AI672868	4852599
AI674583	4875063
AI674586	4875066
AI674594	4875074
AI674871	4875351
AI675889	4876369
AI677810	4887992
AI678281	4888463
AI678832	4889014
AI679619	4889801
AI679629	4889811
AI680218	4890400
AI680242	4890424
AI680343	4890525
AI680416	4890598
AI680506	4890688
AI680874	4891056
AI681405	4891587
AI682088	4892270
AI682287	4892469
AI682362	4892544
AI682937	4893119
AI683094	4893286
AI683183	4893365
AI683298	4893480
AI683431	4893613
AI684039	4895333
AI684157	4895451
AI684170	4895464
AI685124	4896418
AI685632	4896926
AI686139	4897433
AI686325	4897619
AI686779	4898073
AI686957	4898251
AI687362	4898656
AI688098	4899392
AI688187	4899481
AI688573	4899867
AI688807	4900101
AI689722	4901016
AI689762	4901056
AI690157	4901451
AI690236	4901530
AI690278	4901572
AI690979	4902281
AI690986	4902288
AI691072	4902374
AI692513	4969853

Table 6

<u>ACC. NO</u>	<u>GI NUMBER</u>
AI692240	4970280
AI692395	4970335
AI693198	4970538
AI693302	4970642
AI693493	4970833
AI693561	4970901
AI693674	4971014
AI693697	4971037
AI694027	4971427
AI694199	4971539
AI694211	4971551
AI694320	4971660
AI694477	4971817
AI694572	4971912
AI694596	4971936
AI694767	4982667
AI696488	4984338
AI696513	4984413
AI696693	4984593
AI696992	4984892
AI697149	4985149
AI697470	4985370
AI697599	4985499
AI697816	4985715
AI697849	4985749
AI697873	4985773
AI698092	4985992
AI698198	4986098
AI700228	4988128
AI700642	4988542
AI701119	4989019
AI701140	4989040
AI703056	4991156
AI703405	4991305
AI708172	4997948
AI708364	4998140
AI708884	4998660
AI708995	4998771
AI709186	4998962
AI709356	4999132
AI718780	5036036
AI718825	5036081
AI719425	5036681
AI719701	5036957
AI720132	5037426
AI720354	5037610
AI720403	5037659
AI720603	5037859
AI731097	5053232
AI732049	5053361
AI732541	5053654
AI732557	5053670
AI732680	5053793
AI732784	5053397
AI733116	5054229
AI733857	5054970
AI733862	5054975

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI734209	5055322
AI734266	5055379
AI734854	5056378
AI735314	5056838
AI735683	5057207
AI738488	5100469
AI738605	5100586
AI739102	5101083
AI740534	5108822
AI740792	5109080
AI740796	5109084
AI740869	5109157
AI740900	5109188
AI741143	5109431
AI741192	5109480
AI741213	5109501
AI741354	5109642
AI741446	5109734
AI741486	5109774
AI741633	5109921
AI741843	5110131
AI741861	5110236
AI742115	5110403
AI742468	5110756
AI742912	5111200
AI743303	5111591
AI743852	5112140
AI743954	5112242
AI744451	5112739
AI744509	5112797
AI744810	5113098
AI744818	5113106
AI745218	5113506
AI745280	5113568
AI749547	5127811
AI749886	5128150
AI750535	5128799
AI750567	5128831
AI750682	5128946
AI750846	5129110
AI751364	5129628
AI751565	5129829
AI751583	5129847
AI751914	5130178
AI751930	5130194
AI752546	5130810
AI752822	5131086
AI752913	5131177
AI753229	5131493
AI753269	5131533
AI753280	5131544
AI753459	5131723
AI753662	5131926
AI753664	5131928
AI753784	5132136
AI753951	5132215
AI754013	5132277

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI754071	5132335
AI754437	5132701
AI754461	5132725
AI754741	5133005
AI754874	5133138
AI755085	5133343
AI755142	5133406
AI758378	5152101
AI760699	5176366
AI760827	5176494
AI761098	5176765
AI761110	5176777
AI761190	5176857
AI761291	5176953
AI761469	5177136
AI761508	5177175
AI761702	5177453
AI761728	5177484
AI761986	5177653
AI762085	5177752
AI762634	5178301
AI763239	5178906
AI764962	5231471
AI766083	5232592
AI766123	5232632
AI766514	5233023
AI767050	5233559
AI767430	5233859
AI767692	5234201
AI768132	5234641
AI768465	5234974
AI768568	5235077
AI768624	5235133
AI768848	5235357
AI768854	5235363
AI768877	5235386
AI768908	5235417
AI769145	5235654
AI769392	5235901
AI769478	5235987
AI769975	5236484
AI770054	5236650
AI770098	5236553
AI791127	5338843
AI791165	5338881
AI791173	5338889
AI791179	5338895
AI791370	5339086
AI791419	5339135
AI791548	5339264
AI791719	5339519
AI791906	5339622
AI791998	5339714
AI792191	5339907
AI792758	5340474
AI793062	5340778
AI793283	5340939

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI796120	5361583
AI796507	5361970
AI796560	5362023
AI796562	5362025
AI796571	5362034
AI797042	5362514
AI797353	5362825
AI798840	5364312
AI799502	5364974
AI799699	5365171
AI799891	5365363
AI799974	5365446
AI800048	5365520
AI800250	5365722
AI800673	5366067
AI800896	5366368
AI801373	5366845
AI801589	5367061
AI801810	5367282
AI802154	5367626
AI802542	5368014
AI802946	5368407
AI802998	5368470
AI804327	5369799
AI804346	5369818
AI804662	5370134
AI804733	5370205
AI804983	5391573
AI805364	5391930
AI805379	5391945
AI805522	5392088
AI806044	5392610
AI806161	5392727
AI806996	5393562
AI808505	5395071
AI808684	5395250
AI809314	5395880
AI809963	5396529
AI810002	5396568
AI810626	5397192
AI810698	5397264
AI811144	5397710
AI811498	5398064
AI813724	5424939
AI813758	5424973
AI813772	5424987
AI813937	5425152
AI814148	5425363
AI815033	5426248
AI815196	5426401
AI815380	5430926
AI815416	5430962
AI815449	5430995
AI815454	5431000
AI815495	5431041
AI815497	5431043
AI815498	5431044



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI815499	5431045
AI815664	5431210
AI815677	5431223
AI815703	5431249
AI815829	5431375
AI815966	5431510
AI815972	5431518
AI815976	5431522
AI815987	5431533
AI816033	5431579
AI816058	5431604
AI816102	5431648
AI816235	5431781
AI816313	5431859
AI816322	5431868
AI816938	5436017
AI817242	5436310
AI817249	5436317
AI817432	5436511
AI818255	5437334
AI819014	5438178
AI819225	5438304
AI819564	5438643
AI819701	5438780
AI820995	5440074
AI821437	5440516
AI823661	5444332
AI825408	5446079
AI825504	5446175
AI825739	5446470
AI825988	5446659
AI826105	5446776
AI826427	5447098
AI826504	5447175
AI827129	5447800
AI827550	5448221
AI827667	5448338
AI828602	5449273
AI828670	5449341
AI829303	5449974
AI829784	5450455
AI830738	5451514
AI831047	5451718
AI831462	5452133
AI831502	5452173
AI832609	5454589
AI858056	5511682
AI859156	5512772
AI859442	5513058
AI859619	5513235
AI860016	5513632
AI860714	5514330
AI861878	5525985
AI861937	5526104
AI863042	5527149
AI864040	5528147
AI864870	5528977

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI864927	5529031
AI865716	5529823
AI866262	5530369
AI866551	5530658
AI867463	5540479
AI867729	5540745
AI868421	5541437
AI869280	5543248
AI869322	5543290
AI871027	5544995
AI871477	5545526
AI871745	5545717
AI872085	5546134
AI873501	5547550
AI878846	5552895
AI878878	5552927
AI878918	5552967
AI878926	5552975
AI879010	5553059
AI879036	5553085
AI879040	5553089
AI879059	5553108
AI879179	5553228
AI879242	5553291
AI879248	5553297
AI879992	5554041
AI879995	5554044
AI880872	5554921
AI884578	5589742
AI884829	5589993
AI884963	5590127
AI885174	5590338
AI885833	5590997
AI886418	5591582
AI887517	5592681
AI887632	5592796
AI887664	5592828
AI887875	5593039
AI888438	5593525
AI888493	5593657
AI889347	5594511
AI889759	5594923
AI890240	5595404
AI890387	5595551
AI890616	5595780
AI910526	5630262
AI910552	5630288
AI911059	5630795
AI911703	5631558
AI911776	5631631
AI912057	5631912
AI912414	5632269
AI913323	5633097
AI914030	5633885
AI914128	5633983
AI914133	5633988
AI914231	5634086

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI915264	5633119
AI916374	5636151
AI916419	5636136
AI916584	5636439
AI917110	5636965
AI917649	5637504
AI921254	5657218
AI921434	5657398
AI922040	5658004
AI922114	5658078
AI922760	5658724
AI922855	5658819
AI923011	5658901
AI923485	5659449
AI923574	5659538
AI923627	5659591
AI923978	5659942
AI924598	5660562
AI924963	5660927
AI925735	5661699
AI927301	5663265
AI927636	5663600
AI927846	5663810
AI928622	5664586
AI928889	5664853
AI929113	5665077
AI929339	5665303
AI929453	5665417
AI929464	5665428
AI929509	5665473
AI929611	5665575
AI929664	5665628
AI932951	5671688
AI933533	5672270
AI934153	5673023
AI934595	5673392
AI935291	5674161
AI935704	5674574
AI935710	5674580
AI935816	5674686
AI936472	5675342
AI936548	5675418
AI936562	5675432
AI937060	5675930
AI937150	5676020
AI937296	5676166
AI940170	5687151
AI943503	5740813
AI943513	5740823
AI943822	5741132
AI949242	5741552
AI949422	5741820
AI951021	5743331
AI951049	5743359
AI951118	5743428
AI951536	5743846
AI951970	5744280

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AI952286	5744596
AI952294	5744604
AI952763	5745073
AI953152	5745548
AI953711	5746021
AI954167	5746477
AI954406	5746716
AI954458	5746768
AI954585	5746895
AI954800	5747110
AI955087	5747409
AI955769	5748079
AI961028	5753809
AI961413	5754126
AI961592	5754305
AI961840	5754553
AI962319	5755032
AI962736	5755449
AI963623	5756401
AI968069	5764887
AI968159	5764977
AI968311	5765129
AI968401	5765219
AI969567	5766385
AI969804	5766622
AI970381	5767207
AI970594	5767420
AI970919	5767745
AI971281	5768107
AI971655	5768481
AI972279	5769105
AI972479	5769395
AI973022	5769848
AI973109	5769935
AI973126	5769952
AI973218	5770044
AI978832	5803862
AI979288	5804307
AI983220	5810439
AI983430	5810649
AI984541	5811818
AI984636	5811913
AI984763	5812040
AI985122	5812399
AI986240	5813517
AI989530	5836411
AI989600	5836481
AI991281	5838186
AI991469	5838374
AI991546	5838451
AJ000041	2661372
AJC00644	2695707
AJC00881	2924308
AJ001189	3059134
AJ001306	2370148
AJC01381	2764616
AJC01443	6006514

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AJ001838	2832730
AJ002744	6318185
AJ002955	2632122
AJ004832	2982500
AJ004913	3288462
AJ004955	3005935
AJ005016	3005930
AJ005259	3043444
AJ005821	3123571
AJ005893	3114819
AJ006470	3687321
AJ006834	3236104
AJ007398	3668140
AJ007714	4938303
AJ010046	4127946
AJ010069	3483012
AJ010071	3483016
AJ010442	3954884
AJ010444	3954888
AJ010482	5689735
AJ010842	3646129
AJ010953	3646133
AJ011001	4456466
AJ011007	4468340
AJ011497	4128014
AJ012463	3850049
AJ012499	5441359
AJ130733	4995298
AJ131753	6273456
AJ132583	4210725
AJ132637	5689741
AJ132694	4454210
AJ133005	4585654
AJ223075	3355596
AJ223183	3925598
AJ223350	3255986
AJ223352	3255996
AJ223353	3255998
AJ223812	2894518
AJ224172	4107230
AJ224326	2894531
AJ224819	3133091
AJ224875	2996577
AJ227918	3183971
AJ228139	4585698
AJ237946	5701849
AJ238095	5262855
AJ242829	4995304
AJ243229	5706019
AJ243310	5262358
AJ243874	5911829
AJ249248	5834594
AJ249731	5921469
AJ250042	6013005
AL021683	3217033
AL022097	3169107
AL031003	4007185

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AL031346	476029
AL031777	10198609
AL034399	4493484
AL034555	4455444
AL035304	42C0231
AL035666	4914532
AL035731	5405368
AL035756	5927575
AL035886	5927605
AL035985	5405615
AL035998	5405628
AL036026	5405652
AL036123	5405743
AL036165	5927669
AL036169	5405781
AL036170	5927671
AL036354	5405935
AL036415	5405971
AL036423	5405978
AL036445	5405997
AL036483	5927775
AL036499	5406046
AL036575	5406117
AL036594	5406134
AL036650	5406181
AL036763	5927902
AL036764	5927903
AL036801	5927917
AL036890	5406374
AL036902	5927947
AL036988	5927998
AL037031	5928012
AL037053	5928023
AL037105	5406360
AL037226	5406655
AL037256	5866490
AL037267	5866492
AL037316	5406727
AL037456	5928118
AL037471	5928129
AL037583	5928197
AL037638	5406999
AL037646	5928237
AL037707	5407056
AL037724	5407071
AL037732	5407078
AL037798	5407134
AL037800	5407136
AL037812	5407147
AL037828	5407161
AL037847	5407177
AL037895	5407219
AL038058	5407366
AL038162	5407455
AL038234	5407512
AL038242	5407519
AL038395	5407632

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AL038549	5928464
AL038660	5407826
AL038721	5407871
AL038802	5407936
AL038821	5407952
AL038985	5408101
AL039175	5408254
AL039208	5408284
AL039235	5408309
AL039253	5408327
AL039254	5408328
AL039293	5408365
AL039349	5408416
AL039399	5928553
AL039430	5928565
AL039507	5408549
AL039517	5408559
AL039542	5408583
AL039599	5408636
AL039691	5408719
AL039698	5408726
AL039814	5408819
AL040084	5409054
AL040204	5409168
AL040264	5409223
AL040354	5409308
AL040505	5409454
AL040518	5409467
AL040632	5409579
AL040676	5409622
AL040692	5409638
AL040873	5409818
AL040936	5409880
AL040993	5409936
AL041012	5409955
AL041050	5409992
AL041176	5410111
AL041265	5410192
AL041470	5420821
AL041780	5421127
AL042234	5421578
AL042316	5421658
AL042404	5421751
AL042536	5935481
AL042613	5935505
AL042815	5422257
AL042896	5422331
AL043034	5422457
AL043046	5422467
AL043048	5935692
AL043071	5422490
AL043113	5935737
AL043205	5935801
AL043232	5935821
AL043245	5935830
AL043257	5935838
AL043346	5422736

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AL043506	5422893
AL043702	5423088
AL043864	5935908
AL044016	5432244
AL044040	5432268
AL044350	5432572
AL044447	5432665
AL044649	5432864
AL044723	5432935
AL044891	5433089
AL044985	5433170
AL045040	5433219
AL045213	5433375
AL045297	5433457
AL045331	5433489
AL045332	5935985
AL045447	5433592
AL045492	5433629
AL045500	5433637
AL045538	5433669
AL045638	5433760
AL045977	5434077
AL046005	5434101
AL046079	5434167
AL046107	5434194
AL046313	5434394
AL046322	5434403
AL046640	5434705
AL046648	5434713
AL046756	5434818
AL046802	5434864
AL047056	5435110
AL047277	4727224
AL047334	4727905
AL047415	4727330
AL047436	4727351
AL047535	4728531
AL047776	4727964
AL047838	4728026
AL047850	4728038
AL047881	4728069
AL048554	5936565
AL048699	5928420
AL048748	5928441
AL048852	4728161
AL048890	4728199
AL048954	4728263
AL049012	4728321
AL049145	4728455
AL049219	4499949
AL049227	4499957
AL049229	4499961
AL049233	4499967
AL049246	4499983
AL049252	4499993
AL049266	4500015
AL049274	4500025



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
ALC49276	4500029
ALC49294	4500055
ALC49325	4500098
ALC49367	4500158
ALC49381	4500168
ALC49447	4500230
ALC49470	4500264
ALC49471	4500266
ALC49705	4678821
ALC49784	4902698
ALC49799	4775328
ALC49821	5791513
ALC49932	4884176
ALC49934	4884072
ALC49935	4884177
ALC49941	4884184
ALC49942	4884185
ALC49944	4884189
ALC49951	4884198
ALC49957	4884209
ALC49969	4884218
ALC49974	4884224
ALC49981	4884232
ALC49987	4884238
ALC49996	4884248
ALC50013	4884082
ALC50018	4884085
ALC50035	4884276
ALC50037	4884277
ALC50041	4884283
ALC50051	4884099
ALC50064	4884294
ALC50071	4884302
ALC50073	4884305
ALC50089	4884107
ALC50091	4884111
ALC50100	4884127
ALC50101	4884129
ALC50107	4884135
ALC50136	4884346
ALC50141	4884352
ALC50159	4884371
ALC50161	4884375
ALC50162	4884376
ALC50184	4884399
ALC50186	4884401
ALC50187	4884402
ALC50192	4884408
ALC50197	4884434
ALC50198	4884436
ALC50201	4884440
ALC50204	4884443
ALC50255	4886424
ALC50265	4886440
ALC50268	4886442
ALC50272	4886498
ALC50274	4886452

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AL050282	4886464
AL050287	4886474
AL050289	4886510
AL050290	4886512
AL050291	4886521
AL050298	4886502
AL050355	4914575
AL050373	4914577
AL079279	5102585
AL079288	5102747
AL079298	5102736
AL079338	6522989
AL079529	5423423
AL079681	5435257
AL079982	5435556
AL080059	5262463
AL080063	5262468
AL080084	5262498
AL080088	5262504
AL080089	5262506
AL080097	5262519
AL080113	5262548
AL080135	5262576
AL080144	5262592
AL080172	5262642
AL080181	5262657
AL080192	5262673
AL080201	5262685
AL080202	5262687
AL080206	5262692
AL080209	5262698
AL080212	5262701
AL080223	5262715
AL080224	5262716
AL080234	5262727
AL096719	5419854
AL096857	5541862
AL096880	5596701
AL109672	5689836
AL109728	5689794
AL110126	5817020
AL110141	5817036
AL110144	5817039
AL110153	5817055
AL110159	5817063
AL110177	5817087
AL110179	5817089
AL110180	5817090
AL110181	5817093
AL110183	5817095
AL110185	5817098
AL110191	5817105
AL110197	5817115
AL110206	5817125
AL110207	5817126
AL110211	5817133
AL110212	5817134

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AL110214	5817136
AL110222	5817156
AL110233	5817172
AL110238	5817180
AL110247	5817186
AL110242	5817188
AL110256	5817216
AL110273	5817091
AL110297	5817256
AL110357	5865965
AL110384	5936678
AL110395	5866003
AL110412	5866020
AL110463	5866071
AL117237	5834563
AL117340	6002147
AL117392	5911848
AL117412	5912102
AL117413	5912103
AL117423	5911854
AL117427	5911850
AL117429	5911863
AL117430	5911865
AL117441	5911883
AL117443	5911887
AL117446	5911893
AL117458	5911910
AL117471	5911940
AL117499	5912003
AL117505	5912014
AL117514	5912027
AL117516	5912031
AL117526	5912050
AL117534	5912062
AL117536	5912065
AL117537	5912066
AL117543	5912075
AL117550	5912084
AL117554	5912089
AL117563	5912112
AL117567	5912118
AL117576	5912130
AL117584	5912144
AL117595	5912159
AL117599	5912167
AL117609	5912183
AL117616	5912194
AL117619	5912198
AL117621	5912202
AL117623	5912204
AL117643	5912233
AL117644	5912234
AL117665	5912262
AL117666	5912264
AL118582	5924481
AL118621	5924520
AL118746	5924645

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AL118956	5924855
AL118999	5924898
AL119319	5925218
AL119449	5925348
AL119462	5925361
AL119562	5925461
AL119715	5925614
AL119728	5925627
AL119859	5925758
AL120381	5926280
AL120396	5926295
AL120521	5926420
AL120558	5926457
AL120694	5926593
AL120741	5926641
AL120789	5926790
AL120798	5926799
AL120807	5926808
AL120828	5926829
AL120840	5926841
AL120972	5926973
AL121031	5927032
AL121220	5927221
AL121262	5927263
AL121340	5927341
AL121420	5927421
AL121423	5927424
AL121488	5927489
AL121547	5927548
AL121603	6434634
AL121654	6002387
AL121733	6012972
AL121735	6012990
AL121790	8919824
AL122007	6635894
AL122063	6102855
AL122076	6102877
AL122079	6102883
AL122084	6102892
AL122088	6102898
AL122097	6102911
AL122121	6102948
AL133000	6453345
AL133059	6453481
AL133074	6453517
AL133076	6453519
AL133078	6453522
AL133080	6453526
AL133108	6453594
AL133117	6453608
AL135879	6634068
AP000303	4835672
AP000502	5926689
AP000527	5931505
AP000528	5931506
AP000529	5931507
AW002185	5849101

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AW003247	5850163
AW003287	5850203
AW003442	5850358
AW003692	5850603
AW003821	5850737
AW003952	5850868
AW003967	5850883
AW005103	5853881
AW005947	5854725
AW005971	5854749
AW006392	5855170
AW006468	5855246
AW008213	5856991
AW008473	5857251
AW009562	5858340
AW009700	5858478
AW009886	5858664
AW014145	5862902
AW014590	5863347
AW015055	5863812
AW015094	5863851
AW015229	5863916
AW015683	5864440
AW015828	5864585
AW016443	5865200
AW016546	5865303
AW016611	5865368
AW019951	5873431
AW020245	5873775
AW020429	5873959
AW020479	5874009
AW020699	5874229
AW020820	5874350
AW020930	5874460
AW020934	5874464
AW021402	5874932
AW021628	5875158
AW021832	5875362
AW022017	5875557
AW022072	5875602
AW022112	5875642
AW022300	5875830
AW022599	5876129
AW022756	5876286
AW022792	5876322
AW023001	5876531
AW023372	5876902
AW023413	5876943
AW023489	5877019
AW023714	5877244
AW023884	5877344
AW024797	5878327
AW025074	5878604
AW025130	5878660
AW026131	5879661
AW026502	5880032
AW026543	5880073

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AWC26680	5880133
AWC27007	5885763
AWC27219	5885975
AWC27250	5886006
AWC27339	5886095
AWC27586	5886342
AWC28521	5887277
AWC28594	5887350
AWC28606	5887362
AWC28937	5887693
AWC29146	5887902
AWC43908	5904437
AWC44029	5904558
AWC44114	5904643
AWC44142	5904671
AWC44547	5905076
AWC51386	5913656
AWC52140	5914499
AWC55209	5920912
AWC57515	5933154
AWC58559	5934198
AWC58600	5934239
AWC62373	6013758
AWC62376	6013761
AWC62953	6014318
AWC67912	6022910
AWC67913	6022911
AWC68372	6023370
AWC68491	6023489
AWC68579	6023577
AWC70326	6025324
AWC71063	6026061
AWC71696	6026694
AWC71903	6026901
AWC71906	6026904
AWC73731	6028729
AWC75324	6030322
AWC75433	6030518
AWC75906	6030904
AWC76087	6031085
AWC78747	6033899
AWC79132	6034284
AWC80160	6035312
AWC80196	6035348
AWC80456	6035608
AWC80631	6035783
AWC80845	6035997
AWC82236	6037388
AWC83338	6038490
AWC83804	6038956
AWC84017	6039169
AWC84125	6039277
AWC84350	6039502
AWC84663	6039815
AWC84950	6040102
AWC85924	6041130
AWC86063	6041310

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AW087623	6043349
AW088547	6044358
AW088608	6044425
AW088717	6044556
AW090304	6047648
AW090344	6047888
AW102295	6073508
AW102341	6073556
AW102951	6073566
AW103377	6074112
AW103458	6074193
AW104561	6075296
AW104641	6075376
AW105340	6076275
AW117546	6086130
AW117855	6086439
AW118457	6087041
AW118595	6087179
AW118812	6087396
AW129510	6117454
AW129657	6117601
AW130315	6131930
AW130776	6132383
AW130969	6132576
AW131127	6132734
AW131770	6133377
AW132009	6133616
AW134672	6138218
AW134746	6138292
AW134772	6138318
AW134867	6138413
AW135062	6138608
AW135187	6139408
AW135359	6139492
AW135430	6139563
AW135666	6139799
AW136951	6141084
AW138181	6142581
AW138413	6142731
AW138731	6143049
AW139567	6144285
AW140049	6144767
AW140056	6144774
AW148750	6196646
AW148884	6196780
AW149504	6197400
AW149706	6197602
AW149817	6197713
AW150276	6198172
AW150770	6198668
AW151254	6199152
AW151295	6199193
AW151704	6199602
AW152107	6200005
AW152265	6200165
AW152311	6200211
AW157047	6228448

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AW157060	6228461
AW157303	6228704
AW157674	6229075
AW160363	6299396
AW160399	6299432
AW160447	6299480
AW160669	6299641
AW160696	6299729
AW160731	6299764
AW161209	6300242
AW161365	6300398
AW161467	6300500
AW161491	6300524
AW161705	6300738
AW161853	6300886
AW162502	6301535
AW163208	6302241
AW163314	6302347
AW163441	6302474
AW163485	6302518
AW166338	6397863
AW167481	6399006
AW167569	6399094
AW167579	6399104
AW167665	6399190
AW168960	6400485
AW169156	6400681
AW169473	6401081
AW169765	6401290
AW169876	6401401
AW169890	6401415
AW169941	6401466
AW170193	6401707
AW170355	6401880
AW170485	6402010
AW173161	6439109
AW173228	6439176
AW173278	6439226
AW176020	6442070
AW176022	6442072
AW176042	6442079
AW176062	6442099
AW176649	6442686
AW176926	6442963
AW177204	6443228
AW177929	6443966
AW177931	6443968
AW177936	6443973
AW177948	6443985
AW177957	6443994
AW178342	6444379
AW178543	6444684
AW178825	6444862
AW179006	6445043
AW179322	6445359
AW181932	6450392
AW183601	6452115



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
AW183759	6452273
AW183848	6452362
AW188391	6462827
AW188666	6463026
AW235635	6568024
C02739	1465990
C02912	1466163
C03130	1466381
C04376	1467627
C04910	1468161
C04925	1468176
C05816	1502592
C06196	1502972
C06419	1503195
C15094	1569801
C15322	1570029
C16620	1571327
C18148	1579750
C18181	1579783
C18232	1579834
C18436	1580038
C18484	1580086
C18570	1580172
C18654	1580256
C19105	1580707
C20630	1621740
C21370	1622480
C75042	2366104
D00015	2618612
D00017	219909
D00039	3808177
D00422	220063
D00860	220019
D10040	219899
D10495	520586
D10924	219868
D12135	2148331
D12676	219702
D13119	285909
D13286	496368
D13315	219663
D13388	219587
D13627	286010
D13629	285984
D13630	286000
D13641	285986
D13643	6630631
D13645	286008
D13748	219402
D13757	219458
D13866	433410
D13900	433412
D13988	285974
D14041	2326266
D14043	219924
D14446	393314
D14530	414348

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
D14657	285938
D14658	285940
D14659	285942
D14662	285948
D14664	285952
D14665	6630617
D14696	285962
D14697	285964
D14705	415305
D14710	559324
D14812	285968
D14878	1435036
D15057	493244
D16111	435637
D16217	303598
D16307	303594
D16431	598955
D16469	758583
D16480	493657
D16562	506336
D16911	598714
D16922	598769
D16937	598856
D16960	598541
D17039	598762
D17069	598836
D17130	598546
D17260	598877
D17400	451207
D17409	2335046
D17554	433415
D17652	409069
D21092	540512
D21163	434758
D21209	452189
D21210	452191
D21243	416226
D21260	434760
D21262	434764
D21851	434766
D21853	434770
D23662	432362
D23672	577624
D25215	517114
D25274	464185
D25283	457443
D25328	464186
D25542	662389
D26068	436225
D26129	532677
D26362	452518
D26485	468934
D26488	452522
D26598	565646
D26600	565650
D28118	529640
D28358	461257

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
D28420	461246
D28473	551621
D28476	460710
D28480	516759
D28482	520538
D28540	1040688
D28589	460714
D29011	558525
D29012	558527
D29640	473930
D29641	6633994
D29643	473936
D29677	473938
D29954	473940
D29958	473948
D30037	1060904
D30655	485387
D30921	643801
D31763	498151
D31764	498153
D31767	505091
D31770	1321631
D31839	643590
D31883	505093
D31884	505095
D31885	505097
D31886	505099
D31891	505109
D32051	509032
D37931	976228
D37965	807818
D37991	1019367
D38037	532500
D38047	1037163
D38073	862331
D38293	807814
D38305	1580723
D38441	556513
D38491	559327
D38521	559329
D38522	559331
D38524	633070
D38549	559702
D38551	1531549
D38552	559712
D38555	559716
D38583	560790
D42039	577290
D42040	577292
D42044	577300
D42045	577302
D42047	577306
D42063	924266
D42138	1552168
D43947	603948
D43948	603950
D43950	603954

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
D43951	603956
D44466	1808577
D44737	1572212
D45198	971271
D45248	1008914
D45370	871884
D45887	665587
D49372	1552240
D49387	1088447
D49396	682747
D49489	1136742
D49490	1072306
D50369	2605589
D50371	2605591
D50372	2605593
D50405	1665722
D50406	3810868
D50420	2618577
D50487	1742909
D50525	1167502
D50579	2641989
D50645	1741867
D50916	1469174
D50919	1469180
D50926	1469194
D50927	6633951
D50931	1469204
D50977	950730
D52802	953038
D53496	955393
D54335	956232
D55192	957089
D55565	961356
D55653	871882
D55696	1890049
D56420	971023
D58694	968328
D59253	1060898
D60110	961749
D60970	962609
D61285	962924
D61391	1381026
D63475	1665724
D63476	1469865
D63477	1469867
D63478	1469869
D63480	1469873
D63486	1469885
D63874	968887
D63875	961441
D63878	961447
D63997	2662348
D63998	974733
D64015	2281005
D64110	3738221
D67029	1669536
D78152	1060889

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
D78275	1526425
D78333	1655415
D78611	1655421
D79205	1754620
D79826	1130177
D79986	1136389
D79991	1136397
D79994	1136403
D79996	1136407
D80001	1136417
D80005	1136425
D80009	1136433
D81635	1179512
D81855	1180485
D82050	1616917
D82149	1183573
D82176	1183644
D82197	1183685
D82303	1183700
D82345	1841339
D83032	1374697
D83077	1304131
D83197	3893154
D83485	1208426
D83703	1747315
D83735	1526431
D83780	1228042
D84105	1256700
D84145	2114143
D84476	1805499
D84557	1944481
D85181	1906795
D85758	1374694
D85777	1747323
D86228	2081621
D86322	2467376
D86326	2988343
D86967	1504007
D86971	1504015
D86972	1504017
D86974	1504021
D86984	1504041
D86985	6634002
D87078	6634004
D87127	1817551
D87292	1877030
D87328	1813423
D87437	1665768
D87438	2055294
D87442	1665772
D87443	1665774
D87444	1665776
D87450	1665788
D87452	1665792
D87453	1665794
D87455	1665798
D87462	1665808

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
D87466	1665816
D87666	1620016
D87667	1620019
D87682	1663699
D87684	1663703
D87685	1663705
D87735	1620021
D87742	1665824
D87845	1765863
D87930	2443337
D87953	1596166
D87969	1694636
D88153	2289785
D88208	4586400
D88532	1661000
D88674	2641951
D89053	4165017
D89077	1694681
D89092	2780747
D89289	2055306
D89667	1731808
D89675	2055308
D89678	3218539
D89937	3184392
D90209	220087
D90226	219946
D90228	219917
D90359	559319
D90373	219477
D90427	220150
D90452	219895
E00195	2168491
E00882	2169143
E01497	2169753
E01500	2169756
E01574	2169827
E01650	2169903
E01888	2170137
E01915	2170164
E01932	2170180
E01954	2170202
E01956	2170204
E01979	2170227
E02135	2170373
E02628	2170856
E02822	2171050
E02823	2171051
E03413	2171629
E03414	2171630
E03569	2171785
E03814	2172028
E05692	2173879
E05957	2174144
E06721	2174903
E07798	2175931
E08293	2176413
E08515	2176630

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
EC8663	2176776
EC8764	2176876
EC1265	708357
EC1327	707344
EC2593	646152
EC5508	669324
EC5894	669710
EC6621	672219
EC6739	672353
EC7019	672659
EC7432	673092
EC7638	673321
EC7647	673334
EC8493	677060
EC8579	677146
EC9972	682505
F12000	706326
F12493	708486
F12883	708906
F13179	709211
F13272	709376
F19390	4825701
F22763	2061939
F24428	4810054
F25339	4810965
F27229	4812855
F27302	4812928
F27796	4813422
F28190	4813816
F28764	4814390
F33993	4819619
F34889	4820515
G16768	1214194
HC0112	863045
HC0742	863675
HC0752	863685
HC0817	863750
HC1129	864062
HC1205	864138
HC1332	864265
HC1419	864352
HC1516	864449
HC1539	864472
HC1926	864859
HC1979	864912
HC2039	864972
HC2158	865091
HC2230	865163
HC2231	865164
HC2294	865227
HC2307	865240
HC2308	865241
HC2550	865483
HC2725	865653
HC2837	865770
HC3146	866079
HC3436	866369

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H03650	866583
H03785	866718
H03882	866815
H04072	867005
H04382	867315
H04757	868309
H04789	868341
H04828	868380
H05085	868637
H05140	868692
H05264	868816
H05325	868877
H05326	868878
H05445	868997
H05563	869115
H05626	869178
H05645	869197
H05706	869258
H05734	869286
H05741	869293
H05768	869320
H05777	869329
H05818	869370
H05961	869513
H06040	869592
H06093	869645
H06113	869665
H06154	869706
H06249	869801
H06313	869865
H06377	869929
H06380	869932
H06325	870057
H06621	870153
H06944	870476
H07920	872742
H07934	872756
H08016	872838
H08120	872942
H08194	873016
H08210	873032
H08227	873049
H08397	873219
H08417	873239
H08424	873246
H08511	873333
H08542	873364
H08548	873370
H08560	873382
H08582	873404
H08595	873417
H08598	873420
H08621	873443
H08725	873547
H08785	873607
H08796	873618
H08820	873642



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H08850	873670
H08862	873684
H08899	873721
H08924	873746
H08929	873751
H08959	873781
H09065	873887
H09076	873898
H09132	873954
H09164	873986
H09172	873994
H09222	874044
H09332	874154
H09529	874351
H09541	874363
H09616	874438
H09642	874464
H09747	874569
H09749	874571
H09774	874586
H09818	874640
H09882	874701
H09936	874753
H09940	874762
H09959	874781
H09966	874788
H09996	874813
H09997	874819
H10011	874833
H10028	874830
H10036	874850
H10068	874890
H10072	874891
H10073	874896
H10107	874928
H10192	875014
H10208	875030
H10228	875050
H10231	875053
H10342	875164
H10344	875166
H10404	875226
H10413	875235
H10429	875251
H10482	875304
H10555	875377
H10665	875467
H10713	875564
H10761	875581
H10778	875593
H10788	875608
H10932	875752
H10981	875801
H11036	875856
H11051	875871
H11063	875883
H11071	875891

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H11376	876196
H11433	876253
H11519	876339
H11631	876451
H11642	876462
H11678	876498
H11730	876550
H11732	876552
H11760	876580
H11792	876612
H12056	876876
H12081	876901
H12090	876910
H12109	876929
H12190	877010
H12229	877049
H12254	877074
H12338	877158
H12519	877339
H12527	877347
H12923	877743
H12981	877801
H13008	877828
H13339	878159
H13406	878226
H13438	878258
H13688	878508
H13738	878558
H13891	878711
H14057	878905
H14446	879266
H14949	879769
H14985	879805
H15040	879860
H15050	879870
H15099	879919
H15104	879924
H15250	880070
H15366	880186
H15408	880228
H15417	880237
H15533	880353
H15549	880369
H15654	880474
H15655	880475
H15660	880480
H15675	880495
H15677	880497
H15695	880515
H15696	880516
H15746	880566
H15910	880730
H15926	880746
H16152	880972
H16224	881044
H16439	881259
H16454	881274

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H16455	881275
H16537	882762
H16554	882779
H16600	882840
H16743	882963
H16772	883012
H16803	883043
H16833	883073
H16851	883091
H16903	883143
H17002	883242
H17022	883262
H17038	883278
H17121	883361
H17139	883379
H17170	883410
H17195	883435
H17363	883603
H17516	883756
H17618	883858
H17626	883866
H17630	883870
H17696	883936
H17741	883981
H17763	884003
H17773	884013
H17800	884040
H17804	884044
H17869	884109
H17871	884111
H17882	884122
H17888	884128
H17919	884159
H17921	884161
H17934	884174
H17943	884183
H18015	884255
H18017	884257
H18068	884308
H18423	884663
H18424	884664
H18433	884673
H18471	884711
H18560	884800
H18626	884866
H18630	884870
H18633	884873
H18726	884965
H18732	884972
H18838	885078
H18924	885164
H18932	885172
H18936	885175
H19068	885303
H19128	885363
H19153	885393
H19217	885457

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H19234	885474
H19242	885482
H19320	885560
H19324	885564
H19327	885567
H19367	888062
H19393	888088
H19427	888122
H19446	888141
H19826	888521
H20046	888741
H20086	888781
H20388	889083
H20547	889242
H20717	889412
H20743	889438
H20744	889439
H20747	889442
H20847	889542
H20888	889583
H21943	890638
H22136	890831
H22563	891258
H22568	891263
H22734	891429
H22824	891519
H22853	891548
H22854	891549
H22928	891623
H22932	891627
H22956	891651
H23049	891744
H23137	891832
H23157	891852
H23187	891882
H23202	891897
H23211	891906
H23232	891927
H23277	891972
H23370	892065
H23422	892117
H23459	892154
H23482	892177
H23524	892219
H23548	892243
H23555	892250
H23837	892532
H23983	892678
H23985	892680
H24006	892701
H24011	892706
H24176	892871
H24313	893008
H24316	893011
H24317	893012
H24329	893024
H24350	893045

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H24356	893051
H24580	893479
H24856	893755
H24954	893853
H25019	893918
H25211	894334
H25546	894669
H25689	894812
H25806	894929
H25825	894948
H25880	895003
H26319	895442
H26426	895549
H26492	1146489
H26678	896668
H27379	897369
H27545	897535
H27986	898339
H28091	898444
H28581	898934
H28710	899664
H28973	899883
H29149	900059
H29198	900108
H29207	900117
H29215	900125
H29216	900126
H29227	900137
H29256	900166
H29268	900178
H29290	900200
H29315	900225
H29499	900409
H29500	900410
H29521	900431
H29635	900545
H29664	900574
H29897	900807
H30141	901051
H37817	907316
H38210	907709
H38263	907762
H38425	907924
H38554	908063
H38623	908122
H38650	908149
H38848	908347
H38880	908379
H38914	908413
H39560	915612
H39809	915861
H39906	915958
H39960	916012
H40350	916402
H40738	916790
H40921	916973
H41203	917255

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H41222	917274
H41489	917541
H42679	918731
H43317	919369
H43707	919759
H44032	920084
H44448	920500
H44861	920913
H45289	921341
H45447	921499
H45550	921602
H45711	921763
H45810	921862
H46176	922228
H47015	923067
H47076	923128
H47089	923141
H47252	923304
H47315	923367
H47325	923377
H47363	923415
H47715	923767
H48050	924102
H48070	924122
H48138	924190
H48257	986644
H48278	986665
H48318	986705
H48472	986859
H48502	988342
H48697	988537
H49053	988894
H49329	989170
H49331	989172
H49519	989360
H49828	989669
H49903	989744
H50086	989927
H50566	990407
H50655	990496
H50656	990497
H50677	990518
H50770	990611
H51039	990880
H51122	990963
H51425	991266
H51549	991390
H51749	991590
H51765	991606
H51866	991707
H51914	991755
H51976	991817
H52001	991842
H52048	991889
H52119	991960
H52247	992088
H52361	992202

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H52446	992287
H52503	992344
H53141	993288
H53340	993487
H53964	994111
H54020	994167
H54240	994387
H54364	994511
H54417	994564
H54451	994598
H54628	994995
H54639	995026
H54680	995047
H54752	995172
H55907	1004551
H55915	1004559
H55920	1004564
H55955	1004599
H56028	1004672
H56453	1005097
H56898	1009730
H56903	1009735
H57060	1009892
H57064	1009896
H57082	1009914
H57135	1009967
H57136	1009968
H57382	1010214
H57485	1010317
H57585	1010417
H57648	1010430
H57857	1010689
H58234	1011066
H58534	1011366
H58542	1011374
H58571	1011403
H58702	1011534
H58834	1011666
H59188	1012020
H59203	1012035
H59305	1012137
H59731	1012563
H59791	1012623
H60247	1013079
H60344	1013176
H60581	1013413
H60696	1013528
H61016	1013848
H61082	1013914
H61193	1014025
H61232	1014064
H61552	1014384
H61758	1014590
H61885	1014718
H62162	1014994
H62529	1015875
H62563	1016909

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H62839	1017185
H63175	1017976
H63223	1018024
H63416	1018217
H63668	1018469
H63865	1018666
H63952	1018753
H64095	1018896
H64252	1022992
H64556	1114343
H64719	1023459
H65029	1023769
H65030	1023770
H65286	1024026
H65300	1024040
H65395	1024135
H65423	1024163
H65659	1024399
H66398	1025138
H66675	1025415
H66840	1025580
H66877	1025617
H67292	1026032
H67712	1026452
H67975	1026715
H67988	1026728
H68312	1027052
H68542	1027282
H68655	1027395
H68845	1030355
H68848	1030358
H68938	1030214
H69070	1030320
H69529	1039735
H69553	1039759
H69691	1039897
H70047	1114777
H70269	1040475
H70543	1042310
H70670	1042486
H70775	1042591
H70942	1042758
H71076	1042892
H71230	1043046
H71242	1043058
H71713	1043529
H72093	1043909
H72107	1043923
H72322	1044138
H72591	1044407
H72643	1044459
H72722	1044538
H72937	1044753
H72959	1044775
H73013	1046553
H73241	1047389
H73335	1047097



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H73387	1047099
H73590	1046649
H73806	1046740
H73947	1047015
H74086	1047298
H74119	1047331
H74265	1047611
H75328	1049820
H75459	1050105
H75599	1049527
H75695	1049638
H75860	1049931
H77297	1055386
H77494	1055583
H77706	1055795
H77727	1055816
H77765	1055855
H78097	1056186
H78134	1056223
H78135	1056224
H78478	1056567
H78517	1056606
H78888	1056977
H78954	1057043
H79035	1057124
H79078	1057167
H79449	1057538
H79466	1057555
H79534	1057623
H79566	1057655
H79639	1057728
H79973	1058062
H80063	1058152
H80215	1058304
H80325	1058414
H80685	1058774
H80853	1058942
H80936	1059025
H81543	1114633
H81554	1059643
H81659	1059748
H81716	1059805
H81765	1059844
H81817	1059906
H82081	1060170
H82380	1060469
H82596	1060685
H82706	1060795
H83215	1061885
H83293	1061953
H83317	1061987
H83328	1061999
H83524	1062195
H83574	1062245
H83781	1062452
H83784	1062455
H84297	1062953

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H84369	1063040
H84657	1063892
H84670	1063794
H84729	1063923
H84734	1063928
H84759	1064067
H84871	106417C
H84915	1064410
H84926	1064421
H85200	1064009
H85345	1064319
H85437	1064459
H85464	1064486
H85806	1067385
H86010	1067589
H86275	1067854
H86518	1068097
H86554	1068133
H86559	1068138
H86816	1068395
H87106	1068685
H87143	1068722
H87175	1068754
H87419	1068998
H87420	1068999
H87471	1069050
H87807	1069386
H88143	1069722
H88261	1069840
H88329	1069908
H88334	1069913
H88424	1070684
H88435	1070745
H88538	1070848
H89036	1071296
H89104	1071364
H89330	1071590
H89331	1115008
H89376	1071636
H89563	1115032
H89582	1115036
H89589	1115038
H89698	1080128
H89713	1080143
H89795	1080225
H89883	1080313
H91011	1081441
H91641	1087219
H91680	1087258
H91721	1087299
H92106	1087684
H92215	1087793
H92216	1087794
H92234	1087812
H92525	1088103
H92683	1099011
H92821	1099149

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H92375	1099203
H93191	1099519
H93264	1099592
H93328	1099656
H93335	1099663
H93381	1099709
H93424	1099752
H93552	1099880
H93650	1099978
H94179	1101475
H94262	1101558
H94409	1102042
H94471	1102104
H94482	1102115
H94563	1102196
H94617	1102250
H94720	1102353
H94870	1102503
H94927	1102560
H94944	1102577
H95088	1102721
H95161	1102794
H95535	1108677
H95633	1108775
H95638	1108780
H95712	1108854
H95976	1109118
H95978	1109120
H96053	1109195
H96356	1109498
H96392	1109534
H96504	1109972
H96527	1110013
H96557	1110043
H96605	1110091
H96643	1110129
H96647	1110133
H96738	1110224
H96904	1110390
H96908	1110394
H96926	1113969
H97000	1114043
H97033	1114076
H97090	1114133
H97140	1114183
H97186	1114229
H97488	1118373
H97508	1118393
H97514	1118399
H97565	1118450
H97778	1118663
H97851	1118736
H97880	1118765
H97989	1118874
H97993	1118878
H98218	1119103
H98244	1119129

Table 6  
Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
H98255	1119140
H98655	1123323
H98676	1123344
H98688	1123356
H98694	1123362
H98756	1123424
H98812	1123480
H98822	1123490
H99035	1123703
H99075	1123743
H99215	1123883
H99333	1124001
H99460	1124128
H99586	1124254
H99611	1124279
H99650	1124318
H99672	1124340
H99694	1124362
H99722	1124390
H99766	1124434
H99813	1124481
H99997	1124665
J00194	188231
J00200	188411
J02642	182862
J02853	598146
J02871	180968
J02876	182413
J02888	190817
J02908	178854
J02923	189501
J02959	187174
J02966	339919
J03007	179211
J03015	337755
J03040	338312
J03143	184650
J03171	184645
J03209	188618
J03248	183053
J03250	339805
J03464	179595
J03473	337423
J03503	189765
J03507	179715
J03537	337513
J03544	187596
J03575	189737
J03592	339722
J03746	183655
J03779	179833
J03799	186840
J03802	190717
J03827	340418
J03870	337751
J03934	189245
J04080	179645

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
J04137	177782
J04162	183036
J04164	177801
J04177	179729
J04183	136929
J04205	178686
J04208	136391
J04443	551175
J04478	179697
J04607	339666
J04611	178649
J04615	338246
J04621	134428
J04759	190280
J04794	178480
J04823	1311703
J04970	5809681
J04973	180927
J05021	340216
J05032	179101
J05176	177932
J05192	178026
J05211	181607
J05480	179807
J05533	189856
J05594	1203981
J05633	186504
K00409	188523
K00558	340020
K01144	188469
K01911	189273
K02765	179664
K03002	180468
K03515	189237
L00160	189904
L00635	292032
L01042	184097
L01100	184507
L01439	183358
L02426	403455
L02547	180598
L03558	291926
L04636	338044
L05091	388030
L05092	388031
L05093	401844
L05186	182394
L05425	179284
L05779	181394
L06070	292509
L06132	340198
L06133	179252
L06850	180116
L07033	184502
L07077	452044
L07261	178037
L07515	184310

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
L07517	292043
L07540	190153
L07633	186512
L07758	177764
L08044	307520
L08437	179291
L08441	179295
L08599	340184
L09159	307374
L09235	291867
L09749	339906
L10284	186522
L10320	182310
L10376	307378
L10678	190387
L10910	405191
L11005	438655
L11066	307322
L11284	307183
L11566	337492
L11667	348909
L11932	307423
L12136	181536
L12168	173083
L12387	459835
L12686	349765
L13210	307152
L13385	349823
L13434	291843
L13773	306446
L13799	306548
L13806	306554
L13848	307382
L13852	520832
L13977	431320
L14778	306476
L14837	292937
L14848	508491
L15203	402482
L15702	291921
L16510	291887
L16558	307387
L16785	349475
L17128	1220308
L19161	306899
L19184	440305
L19185	440307
L19437	4995970
L19597	306467
L19605	457128
L19713	347318
L19779	306828
L19872	416141
L19956	306456
L20010	306831
L20422	437362
L20431	398028

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
L20688	404044
L20773	431308
L20859	306769
L20941	507251
L22009	347313
L22569	348706
L23320	410217
L25081	407698
L25085	459833
L25610	423142
L25899	414586
L26081	799328
L27841	450276
L28010	452047
L28997	607027
L29008	496077
L29158	465157
L31801	561721
L31951	598182
L33404	521214
L33930	500848
L34087	619817
L34839	1220373
L34840	2766555
L35249	522192
L36642	551607
L37080	559045
L38486	790816
L38608	886257
L38941	1008855
L38951	893287
L38961	624703
L38995	704415
L39833	666896
L40403	887377
L41143	736684
L42110	904118
L42531	886283
L42542	974142
L47276	986910
L47345	992562
L47647	1000861
L47665	1088278
L48984	1066728
L49115	1369830
L49399	1381109
L49504	1236232
L77701	1280205
L77964	1294778
M10036	339840
M10119	182517
M10905	182596
M10906	337747
M10941	180422
M11058	184243
M11119	182205
M11147	182513

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
M11233	181179
M11353	184092
M11548	340238
M11560	178350
M11887	184157
M11949	190687
M12125	339951
M12623	184233
M12670	182482
M12938	182515
M13231	339168
M13520	179459
M13692	178256
M14200	181477
M14328	182113
M14335	182797
M14631	183416
M14648	340306
M15178	184199
M15395	186933
M15470	187680
M15661	337577
M15796	181271
M15885	338414
M15887	181960
M15990	181267
M16247	178044
M16342	184266
M16553	339503
M16660	184420
M16768	339399
M16804	339408
M16827	177963
M16942	188352
M17254	182186
M17323	2072750
M17324	2072751
M17325	2072752
M17517	180497
M17733	339688
M17851	182860
M17885	190231
M17886	190233
M18366	179131
M19308	339782
M19961	180940
M20030	338422
M20260	178891
M20372	189372
M20471	179396
M20681	183684
M21154	178517
M21302	338424
M21574	189733
M21895	189523
M21896	189525
M21897	189529



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
M22324	178535
M22382	190126
M22411	196260
M22533	986883
M22590	179418
M22865	181226
M22913	189019
M22920	189021
M22975	181228
M23161	339899
M23613	189271
M24194	187701
M24594	186262
M24630	514363
M24795	178670
M24900	189618
M24905	537531
M25077	387656
M25245	340233
M25755	338050
M26324	186701
M26325	186688
M26383	188627
M26481	619789
M26663	618463
M26880	340067
M27110	190084
M27330	540460
M27334	540463
M27335	540465
M27504	339809
M27544	184829
M27689	188431
M27691	181038
M27825	304763
M27937	187507
M28016	337203
M28211	550067
M28370	643575
M28526	189775
M29064	337452
M29366	181979
M29536	182066
M29548	181966
M29550	180706
M29870	190823
M29872	178131
M30448	181154
M30818	188902
M30938	186793
M31212	188589
M31606	189940
M31627	184485
M31630	183787
M31899	182178
M32790	180804
M33146	181070

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
M33197	182976
M33308	340236
M34175	179332
M34181	189982
M34840	189620
M35252	180925
M36072	337494
M36341	178984
M36634	340264
M36647	188564
M37197	179968
M37400	179066
M37583	184059
M37716	338266
M38188	189378
M38690	1048988
M55265	177993
M55409	189596
M55421	432978
M55536	183299
M55542	183001
M55543	829176
M57399	292072
M57567	178986
M58028	340071
M58485	180154
M58525	179954
M58549	187592
M58581	180988
M59305	178651
M59465	177865
M59849	182591
M60255	337759
M60457	181249
M60527	181509
M60828	186738
M60857	181334
M61199	181122
M61831	178276
M61832	178278
M61866	454818
M61916	186836
M62015	272265
M62401	181291
M62840	178068
M63180	339679
M63573	337998
M63838	184568
M64098	183891
M64241	190813
M64347	182564
M64571	187382
M64572	179912
M65131	187451
M65217	184404
M68840	187352
M68864	189396

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
M69066	188625
M69106	182999
M69177	187358
M69180	189029
M69181	641957
M69226	187354
M69238	179003
M73547	190161
M73837	188685
M74002	178996
M74091	180627
M74509	325464
M74524	184043
M74558	338087
M74777	180082
M76130	181520
M76729	189519
M76766	339489
M77142	339700
M77804	184656
M77830	4639438
M78906	273219
M80783	179303
M80902	178280
M81757	337732
M82882	180551
M82919	182924
M83205	184225
M83653	179635
M83738	190745
M83822	1530780
M83941	183931
M84443	183265
M84711	182774
M85164	338034
M85168	1785860
M85357	274005
M85423	274071
M86752	184564
M86917	189402
M87284	338651
M87339	1498255
M88163	292495
M88279	186389
M90054	337579
M90104	337925
M90309	182643
M90360	184434
M90516	183081
M92381	339660
M92439	177109
M92843	183442
M93651	338038
M94345	187455
M94556	188855
M94654	196379
M94856	182353

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
M95178	178051
M95627	870802
M95724	180246
M96803	338442
M97347	183440
M97856	184432
M97934	186566
M97935	2281070
M99701	521206
N20046	1124713
N20052	1124719
N20305	1125260
N20328	1125283
N20338	1125293
N20480	1125435
N20482	1125437
N20522	1125477
N20593	1125548
N20602	1125557
N20820	1126001
N20989	1126159
N21081	1126251
N21084	1126254
N21170	1126340
N21201	1126371
N21233	1126403
N21237	1126407
N21334	1126504
N21338	1126508
N21576	1126746
N21624	1126794
N21633	1126803
N21688	1126858
N22007	1128141
N22084	1128218
N22210	1128344
N22230	1128364
N22272	1128406
N22495	1128629
N22687	1136837
N22766	1136916
N22836	1136986
N23010	1137160
N23139	1137289
N23545	1137695
N23605	1137755
N23606	1137756
N23652	1137802
N23771	1137921
N23865	1138015
N23882	1138032
N24042	1138192
N24113	1138263
N24155	1138305
N24284	1138434
N24437	1138587
N24459	1138609

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N24533	1133688
N24579	1133729
N24785	1133935
N24848	1133998
N24869	1139019
N24910	1139060
N24973	1139123
N25030	1139180
N25122	1139272
N25145	1139295
N25262	1139412
N25344	1139494
N25552	1139900
N25751	1140099
N25883	1140231
N25920	1140268
N25936	1140284
N26008	1140356
N26026	1140374
N26083	1140431
N26163	1140511
N26171	1140519
N26359	1140707
N26421	1140769
N26515	1140863
N26556	1140904
N26559	1140907
N26608	1140956
N26724	1141072
N26769	1141117
N26993	1141341
N27218	1141566
N27272	1141620
N27366	1141847
N27610	1142091
N27641	1142122
N27899	1142380
N27935	1142416
N27992	1142473
N28008	1142489
N28268	1146504
N28308	1146544
N28331	1146567
N28384	1146620
N28426	1146662
N28522	1146758
N29457	1147977
N29545	1148065
N29624	1148144
N29638	1148156
N29796	1148316
N29851	1148371
N29901	1148421
N29914	1148434
N29918	1148438
N29986	1148506
N29992	1148512

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N30096	1148616
N30098	1148618
N30131	1148651
N30185	1148705
N30285	1148805
N30328	1148848
N30372	1148892
N30486	1149006
N30562	1149082
N30570	1149090
N30597	1149117
N30655	1149175
N30680	1149200
N30699	1149219
N30704	1149224
N30751	1149271
N31301	1151700
N31312	1151711
N31529	1151928
N31564	1151963
N31605	1152004
N31641	1152040
N31801	1152200
N31808	1152207
N31825	1152224
N31935	1152334
N31952	1152351
N32044	1152443
N32071	1152470
N32072	1152471
N32095	1152494
N32192	1152591
N32226	1152625
N32485	1152884
N32514	1152913
N32542	1152941
N32587	1152986
N32594	1152993
N32737	1153136
N32768	1153167
N32904	1153303
N33041	1153440
N33228	1153627
N33263	1153662
N33264	1153663
N33274	1153673
N33323	1153722
N33331	1153730
N33366	1153765
N33443	1153842
N33550	1153949
N33567	1153966
N33778	1154183
N33927	1154327
N33965	1154365
N34042	1154442
N34117	1154517

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N34141	1154541
N34136	1154586
N34316	1155458
N34395	1155537
N34436	1155578
N34482	1155624
N34611	1155753
N34824	1155966
N34892	1156034
N34895	1156037
N34924	1156066
N34943	1156085
N34945	1156087
N35020	1156162
N35067	1156209
N35369	1156511
N35489	1156631
N35555	1156697
N35579	1156721
N35603	1156745
N35772	1156914
N35863	1157005
N35888	1157030
N35907	1157049
N35922	1157064
N36008	1157150
N36090	1157232
N36233	1157375
N36327	1157469
N36389	1157531
N36402	1157544
N36794	1157936
N36967	1158109
N36968	1158110
N38860	1162067
N38992	1162199
N39233	1162440
N39338	1162545
N39426	1162633
N39590	1162797
N39611	1162818
N39674	1162881
N39836	1163381
N40017	1163562
N40101	1163646
N40202	1163747
N40262	1163807
N40375	1163972
N40582	1164179
N40598	1164195
N40717	1164314
N40743	1164340
N40852	1164449
N40939	1164537
N40951	1164549
N40952	1164550
N40976	1164574

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N41386	1165417
N41418	1165449
N41773	1165804
N41826	1165857
N41827	1165858
N42196	1166227
N42772	1167202
N42929	1166673
N42970	1166714
N42986	1166730
N43976	1182504
N44001	1182529
N44337	1182855
N44743	1185909
N45083	1186249
N45167	1186333
N45223	1186389
N45236	1186402
N45282	1186448
N45398	1186564
N45940	1187106
N45983	1187149
N46575	1187741
N46759	1187925
N46845	1188011
N46947	1188113
N47008	1188174
N47012	1188178
N47044	1188210
N47075	1188241
N47113	1188279
N47208	1188374
N47214	1188380
N47240	1188406
N47292	1188458
N47308	1188474
N47316	1188482
N47360	1188526
N47425	1188591
N47443	1188609
N47445	1188611
N47604	1188770
N47691	1188857
N47717	1188883
N47738	1188904
N47829	1188995
N47886	1189052
N47902	1189068
N47941	1189107
N47952	1189118
N47954	1189120
N47961	1189127
N48050	1189216
N48075	1189241
N48078	1189244
N48259	1189425
N48261	1189427



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N48271	1189437
N48302	1189468
N48325	1189491
N48356	1189522
N48580	1189746
N48590	1189756
N48701	1189867
N48707	1189873
N48804	1189970
N48809	1189975
N48901	1190067
N48913	1190079
N49079	1190245
N49098	1190264
N49107	1190273
N49109	1190275
N49181	1190347
N49186	1190352
N49261	1190427
N49346	1190512
N49389	1190555
N49405	1190571
N49471	1190637
N49534	1190700
N49548	1190714
N49574	1190740
N49577	1190743
N49589	1190755
N49605	1190771
N49619	1190785
N49629	1190795
N49725	1190891
N49899	1191065
N50079	1191245
N50432	1191598
N50563	1191729
N50647	1191813
N50729	1191895
N50733	1191899
N50745	1191911
N50787	1191953
N50797	1191963
N50806	1191972
N50827	1191993
N50828	1191994
N50843	1192009
N50853	1192019
N50859	1192025
N50864	1192030
N50880	1192046
N50904	1192070
N50912	1192078
N50935	1192101
N50962	1192128
N50983	1192149
N51002	1192168
N51069	1192235

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N51107	1192273
N51226	1192392
N51280	1192446
N51290	1192456
N51297	1192463
N51335	1192501
N51343	1192509
N51357	1192523
N51362	1192528
N51367	1192533
N51441	1192607
N51498	1192664
N51563	1192729
N51574	1192740
N51583	1192749
N51709	1192875
N51740	1192906
N51806	1192972
N51883	1193049
N51987	1193153
N52151	1193412
N52158	1193419
N52178	1193312
N52193	1193327
N52271	1193437
N52350	1193516
N52432	1193598
N52450	1193616
N52554	1193720
N52589	1193755
N52675	1193841
N52767	1193933
N52837	1194003
N52875	1194041
N52876	1194042
N52911	1194077
N52973	1194139
N53031	1194197
N53033	1194199
N53133	1194299
N53214	1194380
N53378	1194544
N53380	1194546
N53421	1194587
N53447	1194613
N53456	1194622
N53492	1194658
N53534	1194700
N53940	1195106
N53959	1195125
N54036	1195202
N54254	1195420
N54512	1195832
N54551	1195871
N54596	1195916
N54728	1196048
N54763	1196083

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N54788	1196108
N54973	1196293
N55167	1198046
N55266	1198145
N55339	1198218
N55430	1198309
N55459	1198338
N56037	1199085
N56690	1200580
N56875	1200765
N56982	1200872
N57002	1200892
N57475	1201365
N57483	1201373
N57526	1201416
N57722	1201612
N57853	1201748
N57872	1201762
N58052	1201942
N58107	1201997
N58136	1202026
N58148	1202038
N58170	1202060
N58276	1202166
N58417	1202307
N58553	1202448
N58813	1202708
N59078	1202968
N59119	1203009
N59136	1203026
N59153	1203048
N59206	1203096
N59273	1203168
N59295	1203185
N59336	1203226
N59532	1203422
N59626	1203516
N59808	1203698
N59816	1203706
N59826	1203716
N59866	1203756
N59870	1203760
N60172	1206323
N61079	1210008
N61096	1209909
N61128	1209941
N61132	1209945
N61179	1209992
N61244	1210073
N61245	1210074
N61251	1210080
N61271	1210100
N61293	1210122
N61301	1210130
N61332	1210161
N61372	1210201
N61376	1210205

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N62394	1210223
N62403	1210232
N62448	1210277
N62498	1210327
N62696	1210525
N62726	1210555
N62745	1210574
N62763	1210592
N62766	1210595
N62780	1210609
N62799	1210628
N62817	1210646
N62866	1210695
N62924	1210753
N62936	1210765
N62948	1210777
N63057	1210886
N63153	1210982
N63172	1211001
N63286	1211115
N63375	1211204
N63387	1211216
N63436	1211265
N63543	1211372
N63567	1211396
N63609	1211438
N63646	1211475
N63727	1211556
N63744	1211573
N63768	1211597
N63784	1211613
N63807	1211636
N63848	1211677
N63988	1211817
N63991	1211820
N64379	1212208
N64391	1212220
N64508	1212337
N64576	1212405
N64597	1212426
N64603	1212432
N64617	1212446
N64706	1212535
N64762	1212591
N64774	1212603
N64796	1212625
N64814	1212643
N64840	1212669
N65950	1218075
N66085	1218210
N66132	1218257
N66135	1218260
N66139	1218264
N66158	1218283
N66178	1218303
N66203	1218328
N66278	1218403

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N66346	1218471
N66348	1218473
N66393	1218518
N66454	1218579
N66572	1218697
N66580	1218705
N66724	1218849
N66734	1218859
N66737	1218862
N66900	1219025
N66925	1219050
N66957	1219062
N67039	1219164
N67109	1219234
N67168	1219293
N67274	1219399
N67570	1219695
N67571	1219696
N67619	1219744
N67762	1219887
N67766	1219891
N67832	1219957
N67861	1219986
N67891	1220016
N68399	1224560
N68465	1224626
N68576	1224737
N68686	1224847
N68719	1224880
N68929	1225089
N68998	1225159
N69068	1225229
N69283	1225444
N69425	1225586
N69491	1225652
N69499	1225660
N69528	1225689
N69653	1225814
N69675	1225836
N69876	1226456
N69989	1226569
N70038	1226618
N70592	1227172
N70654	1227234
N70714	1227294
N70791	1227371
N70794	1227374
N71080	1227660
N71769	1228481
N71861	1228573
N71982	1228694
N72115	1229219
N72137	1229241
N72150	1229254
N72196	1229300
N72215	1229319
N72263	1229367

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N72274	1229378
N72458	1229562
N72648	1229752
N72697	1229801
N72922	1230026
N73033	1230137
N73083	1230187
N73091	1230195
N73101	1230205
N73252	1230356
N73301	1230405
N73480	1230765
N73563	1230848
N73584	1230869
N73958	1231243
N74131	1231416
N74267	1231552
N74392	1231677
N74617	1231902
N74623	1231908
N74889	1237568
N74956	1237502
N74995	1237541
N75055	1237633
N75318	1237896
N75356	1237934
N75394	1237972
N75468	1238046
N75473	1238051
N75893	1238471
N75947	1238525
N75979	1238557
N76088	1238666
N76101	1238679
N76201	1238779
N76215	1238793
N76672	1239250
N77134	1239712
N77263	1239841
N77277	1239855
N77514	1240215
N77779	1240480
N77828	1240529
N78083	1240784
N78092	1240793
N78279	1240980
N78903	1241604
N78927	1241628
N79180	1241881
N79230	1241931
N79353	1242054
N79427	1242128
N79712	1242413
N79738	1242439
N79745	1242446
N79747	1242448
N79989	1242690

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N80129	1242830
N80764	1243465
N81049	1243750
N81153	1243859
N81205	1243906
N86292	1439296
N86927	1440129
N89671	1442998
N89676	1443003
N89783	1443110
N89861	1443188
N89973	1443300
N90051	1443378
N90514	1443841
N90523	1443850
N90583	1443910
N90779	1444106
N90806	1444133
N90882	1444209
N90917	1444244
N91003	1444330
N91096	1444423
N91117	1444444
N91175	1444502
N91258	1444585
N91259	1444586
N91382	1444709
N91385	1444712
N91566	1444893
N91744	1264053
N91767	1264076
N91797	1264106
N91811	1264120
N91825	1264134
N91887	1264196
N91914	1264223
N91921	1264230
N92160	1264469
N92310	1264619
N92478	1264787
N92433	1264792
N92498	1264807
N92646	1264955
N92699	1265008
N92755	1265064
N92764	1265073
N92842	1265151
N92895	1265204
N92901	1265210
N93236	1265545
N93428	1265737
N93438	1265747
N93470	1265779
N93715	1266024
N93721	1266030
N93790	1266099
N93924	1266233

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
N94098	1266407
N94111	1266420
N94259	1266568
N94351	1266660
N94487	1266796
N94829	1267170
N94855	1267125
N95007	1267289
N95187	1267478
N95226	1267507
N95435	1267706
N95476	1267767
N95495	1267834
N98283	1269706
N98328	1269973
N98569	1269992
N98593	1270208
N98672	1270094
N98749	1270172
N99088	1270541
N99553	1270966
N99659	1271101
N99698	1271140
N99711	1271153
N99839	1271382
R00128	749864
R00275	750011
R00276	750012
R00283	750019
R00284	750020
R00479	750215
R00480	750216
R00707	750443
R00809	750545
R00884	750620
R01094	750830
R01139	750875
R01245	750981
R01304	751040
R01348	751084
R01515	751251
R01637	751373
R01739	751475
R01937	751673
RC2439	752175
R02586	752322
R05416	756036
R05660	756280
R05693	756313
R05810	756430
RC5886	756506
R06119	756739
R06307	756927
R06362	756982
R06372	756992
RC6479	757099
R06706	757326



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R06716	757336
R06862	757482
R06944	758867
R07012	758935
R07115	759038
R07134	759107
R07196	759119
R07506	759429
R07891	759814
R07948	759871
R08121	760044
R08266	760189
R08292	760215
R08658	760581
R08871	760794
R08932	760855
R08935	760858
R08938	760861
R09179	761102
R09504	761427
R09729	761652
R09747	761670
R09980	761936
R10011	761967
R10015	761971
R10140	762096
R10154	762110
R10284	762240
R10301	762257
R10378	762334
R10438	762394
R10553	762509
R10935	763670
R10947	763682
R10948	763683
R11114	763849
R11236	763971
R11510	764245
R11581	764316
R11587	764322
R11605	764340
R11877	764612
R11885	764620
R11888	764623
R12113	764848
R12183	764918
R12356	765432
R12385	765461
R12449	765525
R12473	765549
R12804	765880
R12808	765884
R13434	766510
R13557	766633
R13761	766837
R13850	766926
R13878	766954

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R14008	767084
R14230	767306
R14619	768892
R14631	768904
R14684	768957
R14689	768962
R14699	768972
R15409	768157
R15740	768024
R15779	768063
R15784	768199
R15813	768228
R15870	768285
R15880	768295
R15891	768306
R16146	768074
R16153	768081
R16241	768489
R16245	768493
R16259	768507
R16295	769905
R16408	770018
R16541	770151
R16596	770206
R16676	770286
R16957	770567
R17092	770702
R17096	770706
R17110	770720
R17320	770930
R17476	771086
R17747	771357
R17962	771572
R18215	771825
R18259	771868
R18274	771884
R18412	772022
R18975	772585
R19183	772793
R19453	773063
R19478	773088
R19498	773108
R19761	774395
R19869	774503
R19878	774512
R19977	774611
R20063	774697
R20331	774965
R20424	775058
R20547	820487
R20616	775397
R20628	775409
R20638	775419
R20639	775420
R20640	775421
R20651	775432
R20669	775450

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R20813	775594
R22003	776784
F22024	776805
R22088	776869
R22136	776917
P22156	776937
R22206	776987
R22308	777089
P22579	777360
R22748	777573
R23055	777943
R23241	778129
F23246	778134
P23270	778158
R23609	778497
P23727	778615
R23735	778623
R23790	778678
R23858	778746
R24400	779288
F24451	779339
R24506	779394
R24803	779691
R24834	779722
R25166	780054
P25377	781512
R25403	781538
R25464	781599
R25577	781712
R25614	781749
R25807	781942
R25823	781958
R26186	782321
P26206	782341
R26444	782579
R26456	782591
R26785	782920
R26859	782994
R26960	783095
R27004	783139
P27193	783328
R27450	783585
P27767	783902
R28254	784389
R28287	784422
R28397	784532
R28584	784719
R28603	784738
R28660	784795
R31114	786957
R31413	787256
R31701	787544
R31789	787632
R32406	788249
R32613	788456
R32952	788795
R33103	788961

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R33303	789161
R33351	789209
R33353	789211
R33609	789467
R33762	789620
R33779	789637
R33917	789775
R34225	790083
R34273	790131
R34284	790142
R34331	790189
R34443	791344
R34553	791454
R34894	791795
R35051	791952
R35230	792131
R35283	792184
R35529	792430
R35665	792566
R35797	792698
R35943	792844
R36409	793310
R36465	793366
R36477	793378
R36523	793424
R36587	793488
R36969	794425
R36989	794445
R37079	794535
R37224	794680
R37289	794745
R37357	794813
R37395	794851
R37519	794975
R37738	795194
R37780	795236
R38017	795473
R38169	795625
R38179	795635
R38261	795717
R38364	795820
R38369	795825
R38412	795868
R38539	795995
R38613	796069
R38640	796096
R38645	796101
R38678	796134
R38809	796265
R38891	796347
R38894	796350
R38935	796391
R38943	796399
R38944	796400
R38952	796408
R39014	796470
R39066	796522

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R39059	796525
R39111	796567
R39131	796647
R39325	796781
R39364	796820
R39446	796902
R39716	797172
R39755	797221
R39852	797478
R39891	797507
R39901	797517
R39951	797567
R40018	820767
R40037	820786
R40057	822754
R40105	820806
R40176	822802
R40231	820875
R40244	821032
R40373	821116
R40434	820883
R40481	822861
R40663	821001
R40780	823031
R40970	821229
R41329	816637
R41357	816664
R41389	816695
R41685	816978
R41782	817487
R41804	817508
R41943	817640
R41972	817667
R41994	817689
R42061	817007
R42112	800336
R42331	825268
R42490	817254
R42520	817283
R42533	817295
R42569	817331
R42593	817345
R42600	817361
R42685	819630
R42736	819675
R42763	800987
R42790	819699
R42823	819734
R42831	819742
R42946	819851
R42994	820056
R43017	820079
R43053	820114
R43139	825415
R43205	825430
R43271	821378
R43308	821415

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R43319	821426
R43328	819855
R43432	819950
R43452	819970
R43485	820003
R43535	821464
R43553	821482
R43566	821493
R43699	821612
R43798	823647
R43805	823652
R43910	821788
R43915	821793
R44048	821916
R44078	821946
R44132	821997
R44164	822028
R44201	822064
R44292	821263
R44346	820642
R44404	823302
R44447	823344
R44530	823920
R44538	823927
R44544	823933
R44617	824005
R44664	824046
R44734	824112
R44741	824119
R44754	824132
R44770	824147
R44776	824153
R44816	824193
R44837	824212
R44840	824215
R44936	823203
R44985	824339
R45114	823468
R45118	823472
R45144	823498
R45157	823511
R45192	823546
R45264	821667
R45292	822151
R45402	823670
R45470	820725
R45517	823731
R45632	823844
R45672	822118
R45686	822132
R45952	824285
R45964	823208
R46000	823239
R46003	823242
R46295	805692
R46700	822667
R46794	822611

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R46816	822633
R46837	822654
R47893	809919
R47979	810005
R48046	810072
R48320	810346
R48833	810859
R48890	810916
R48977	817743
R49052	817814
R49124	820193
R49126	820195
R49436	820334
R49439	820337
R49462	820360
R49555	820399
R49592	825123
R49644	825174
R49695	825225
R49731	820445
R49734	311636
R50104	812006
R50277	812179
R50467	812369
R50752	812654
R50775	812677
R51064	812966
R51080	812982
R51100	813002
R51236	813138
R51261	813163
R51273	813175
R51382	813284
R51416	813318
R51506	813408
R51535	813437
R51540	813442
R51617	813519
R51737	813639
R51865	813767
R51872	813774
R51912	813814
R52015	813917
R52082	813984
R52085	813987
R52088	813990
R52089	813991
R52387	814289
R52526	814428
R52530	814432
R52543	814445
R52624	814526
R52640	814542
R52729	814631
R52786	814698
R52789	814691
R52794	814696

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R52796	814698
R52901	814803
R53072	814974
R53294	815196
R53311	815213
R53342	815244
R53348	815250
R53428	815330
R53446	815348
R53455	815357
R53558	815460
R53757	815659
R53758	815660
R53943	815845
R53951	815853
R53963	815865
R54036	815938
R54105	816007
R54109	816011
R54179	816081
R54212	816114
R54273	816175
R54492	816394
R54590	816492
R54594	816496
R54846	818968
R54850	818972
R54855	818977
R55220	824515
R55261	824556
R55535	824830
R55543	824838
R55600	824895
R55619	824914
R55750	825825
R55882	825988
R55965	826071
R56046	826152
R56055	826161
R56100	826206
R56106	826212
R56123	826229
R56149	826255
R56382	826488
R56604	826710
R56613	826719
R56642	826748
R56771	826877
R56840	826946
R56854	826960
R56870	826976
R56877	826983
R56885	826991
R56898	827004
R56901	827012
R58950	829648
R59031	829726



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R59068	829763
R59087	829782
R59147	829842
R59197	829892
R59304	829999
R59369	830064
R59473	830168
R59556	830251
R59618	830313
R59621	830316
R59722	830417
R59789	830484
R59846	830541
R59936	830631
R59990	830685
R60014	830709
R60019	830714
R60020	830715
R60223	830918
R60328	831023
R60395	831090
R60705	831400
R60713	831408
R60717	831412
R60722	831417
R60731	831426
R60847	831542
R60946	831641
R60949	831644
R60981	831676
R60995	831690
R61073	831768
R61126	831821
R61189	831884
R61196	831891
R61372	832067
R61374	832069
R61395	832090
R61436	832131
R61556	832251
R61601	832296
R61734	832429
R61780	832475
R61796	832491
R61847	832542
R61866	832561
R61871	832566
R61883	832578
R62289	834168
R62352	834231
R62470	834349
R62742	834621
R62780	834659
R62926	834805
R63022	834901
R63085	834964
R63106	834985

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Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R63129	835008
R63251	835130
R63253	835132
R63646	835525
R63823	835702
R64194	836073
R64231	836110
R64454	836333
R64693	836572
R65963	838601
R66006	838644
R66082	838720
R66101	838739
R66162	838800
R66438	839076
R66923	839561
R67081	839719
R67147	839785
R67218	839856
R67259	839897
R67466	840104
R68272	841789
R68409	841926
R68581	842098
R68909	842426
R69584	843101
R69724	843241
R69818	843335
R69934	843451
R69940	843457
R69943	843460
R70116	843633
R70193	843710
R70270	843787
R70570	844087
R70598	844115
R70639	844156
R70649	844166
R70675	844192
R70684	844201
R70685	844202
R70995	844512
R71124	844641
R71335	844852
R71393	844910
R71431	844948
R71619	845136
R71689	845721
R72215	846247
R72403	846435
R72434	846466
R72518	846550
R72618	846650
R72738	846770
R72768	846800
R72977	847009
R73088	847120

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R73525	847557
R73545	847577
R74152	848522
R74169	843539
R74203	848573
R74321	848691
R74478	848843
R74597	848967
R75754	850436
R76229	850911
R76235	850917
R76244	850926
R76247	850929
R76281	850963
R76505	851154
R76782	851414
R77185	851817
R77186	851818
R77512	852622
R77718	852928
R77854	852964
R77919	853029
R77948	853053
R78386	853496
R78559	854840
R78584	854865
R78607	854888
R78725	855006
R80217	856498
R80235	856516
R80279	856560
R80387	856668
R80790	857071
R80952	857133
R81053	857334
R81486	858089
R81831	858434
R82041	858644
R82299	861690
R82317	861708
R82429	861820
R82456	861847
R82644	862035
R82733	862124
R83407	928284
R83716	928593
R83896	928773
R84308	942714
R84398	942804
R85291	943697
R86242	944648
R86265	944671
R86347	945484
R86970	945711
R87758	946571
R87377	946690
R88246	947059

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R88267	947080
R88370	950265
R88764	953591
R88904	953731
R88915	953742
R88918	953745
R89082	953909
R89287	954114
R89317	954144
R89358	954185
R89363	954190
R89403	954230
R89490	954317
R89611	954438
R89700	954527
R89765	954592
R89846	954673
R89849	954676
R90934	958474
R91218	958758
R91220	958760
R91398	958938
R91503	959043
R91517	959057
R91566	959106
R91950	959490
R92163	959703
R92186	959726
R92201	959741
R92216	959756
R92227	959767
R92281	959821
R92362	959902
R92435	959975
R92455	959995
R92512	960052
R92548	960088
R92601	960141
R92801	965155
R92806	965160
R92812	965166
R92994	965348
R93068	965422
R93124	967290
R93176	967342
R93237	967403
R93309	967475
R93401	967567
R93515	967681
R93591	967757
R93727	967893
R93729	967895
R93744	967910
R93759	967925
R93767	967933
R93875	969270
R94399	969794

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
R94504	969899
R94533	970028
R95684	981344
R95773	981433
R95811	981471
R95821	981481
R95893	981553
R95962	981622
R96147	981807
R96155	981815
R96220	981880
R96520	982180
R96561	982221
R96579	982239
R96598	982258
R96827	982487
R96914	982574
R96941	982601
R97066	982726
R97226	982886
R98008	983668
R98047	983707
R98064	983724
R98344	984004
R98407	985119
R98423	985135
R98472	984989
R98487	985004
R98842	985443
R98851	985452
R99043	985644
R99478	986079
R99503	986104
R99573	986174
R99755	986356
R99831	986432
S39329	250893
S41458	252252
S42658	1679960
S48196	258294
S50015	260878
S50223	260311
S57235	298664
S59049	299704
S60099	300168
S63912	399757
S64650	407595
S65371	410699
S66196	239157
S66431	435777
S67325	455712
S67815	460568
S67859	239577
S68015	461032
S69022	516580
S69189	545593
S69272	546087

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
S69738	545464
S70154	546900
S70290	546602
S71513	240867
S72481	632789
S73498	688010
S73591	688296
S74678	241477
S75755	861469
S76756	913853
S77601	998394
S78203	999212
S82081	1488412
S82240	1839516
S94541	247146
T0088C	277361
TC2792	319308
TC4864	316023
T05006	316161
T05635	316785
TC6574	317723
TC6925	318074
T06984	318133
TC7196	318345
TC8287	389315
T08329	389357
T08429	389457
TC8676	389704
T10145	471494
T10307	471656
T18813	488232
T18977	601020
T19093	601136
T27258	624974
T28083	610181
T28638	610736
T28974	611072
T29959	612057
T30604	612702
T30677	612775
T30767	612865
T31772	613870
T32212	614310
T34459	616557
T34760	616858
T35276	617374
T36781	620598
T37414	621231
T40531	648153
T40905	648489
T41077	648648
T41232	648790
T43474	2758332
T47291	649273
T47520	649500
T47625	649605
T47718	649698

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
T48411	650391
T48412	650392
T48624	650484
T48692	650552
T49325	651185
T49326	651186
T49355	651215
T49539	651399
T49801	651661
T50139	651999
T50370	652230
T50397	652257
T50699	652559
T50995	652855
T51043	652903
T51229	653089
T51539	653399
T51617	653477
T51904	653764
T51995	653855
T52311	654171
T52320	654180
T52700	654560
T52820	654630
T52823	654683
T52840	654700
T53389	655249
T53424	655284
T53907	655768
T54095	655956
T54164	656025
T54298	656159
T54342	656203
T54527	656398
T54672	656533
T55607	657468
T55639	657500
T55728	657589
T56013	657874
T56281	658142
T56726	658587
T57359	659220
T57386	659247
T57609	659470
T57803	659664
T57920	659781
T57927	659788
T58002	659863
T58146	660007
T58430	660267
T58434	660271
T58932	660769
T59024	660861
T59099	660936
T59274	661111
T59478	661315
T59658	661495

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
T59668	661505
T59687	661524
T59793	661630
T59873	661710
T59998	661835
T60063	661900
T60075	661912
T60111	661948
T60149	661986
T60161	661998
T60168	662005
T60601	663638
T60740	663777
T61050	664087
T61122	664159
T61271	664308
T61323	664360
T61421	664458
T61701	664738
T61792	665035
T61851	665094
T61899	665142
T61938	665181
T61960	665203
T62040	665283
T62072	665315
T62164	665407
T62179	665422
T62552	666209
T62753	666410
T62842	666499
T63027	666684
T63031	666688
T63245	667110
T63324	667189
T63342	667207
T63893	667758
T63980	667845
T63981	667846
T64192	668057
T64216	668081
T64223	668088
T64312	668177
T64323	668188
T64433	668298
T64469	673514
T64609	673654
T64625	673670
T64630	673675
T65098	674143
T65174	674219
T65398	674443
T65642	674687
T65736	674781
T65765	674810
T65844	674889
T65902	674947



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
T65998	675043
T66154	675199
T66180	675225
T66320	675365
T66348	675393
T66793	676233
T66815	676255
T66816	676256
T66832	676272
T66936	676376
T67053	676493
T67058	676498
T67128	676568
T67265	676705
T67444	678592
T67807	678955
T67823	678971
T67978	679126
T68057	679205
T68102	679250
T68445	679593
T68453	679601
T68878	680026
T68894	680042
T69270	680418
T69305	680453
T69348	680496
T69477	680625
T69522	680670
T69593	680741
T70057	681205
T70122	681270
T70123	681271
T70198	681346
T70288	681436
T70438	681586
T70522	681670
T70810	685331
T70892	685413
T70901	685422
T70999	685520
T71008	685529
T71042	685563
T71061	685582
T71122	685643
T71154	685675
T71360	685881
T71387	685908
T71615	686136
T71889	686410
T71965	686486
T71991	686512
T72034	686555
T72067	686588
T72167	686688
T72175	686696
T72235	686756

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
T72336	686857
T72376	686897
T72543	689218
T72915	689590
T73031	689706
T73262	689937
T73556	690231
T73651	690326
T73883	690558
T74004	690679
T74023	690698
T74105	690780
T74203	690878
T74257	690932
T74846	691521
T75072	691834
T77007	694210
T77385	694588
T77410	694613
T77631	694834
T77729	694932
T77840	695043
T78419	696928
T78615	697124
T78909	697418
T78948	697457
T79274	697783
T79397	697906
T79514	698023
T79957	698466
T80832	703717
T80924	703809
T81107	703992
T81140	704025
T81289	704174
T81369	704254
T81537	704544
T81666	704673
T81995	705002
T83657	711945
T83709	711997
T83842	712130
T84308	712596
T84605	712957
T84934	713286
T84943	713295
T84975	713327
T84996	713348
T85173	713525
T85958	714310
T86219	714571
T86527	714879
T86708	715060
T86932	715284
T87139	715491
T87235	715587
T87515	715867

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
T87572	715924
T88702	717215
T88721	717234
T89060	717573
T89084	717597
T89530	718043
T89996	718509
T90621	719134
T90639	719152
T90971	722884
T90980	722893
T91054	722967
T91168	723081
T91225	723138
T91244	723157
T93613	725786
T94611	728099
T95139	733763
T95151	733775
T95274	733898
T95320	733944
T95670	734294
T95804	734428
T95898	734522
T96718	735342
T96913	735537
T97170	735794
T97303	746648
T97352	746697
T97457	746802
T97592	746937
T97599	746944
T97762	747107
T97890	747235
T97897	747242
T98001	747346
T98056	747401
T98099	747444
T98201	747546
T98253	747990
T98615	748352
T98628	748365
T98662	748399
T99011	748748
T99158	748895
T99191	748928
T99280	749017
T99386	749123
T99603	749340
T99617	749354
T99715	749452
T99719	749456
T99852	749589
T99948	749685
UC0238	404860
UC093C	405043
UC0946	405048

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
U00947	405049
U01184	440176
U01923	460085
U01925	460086
U02390	409928
U02493	407307
U02556	413824
U02570	450780
U02619	414932
U02680	451481
U02882	433346
U03271	595256
U03274	468823
U03688	501030
U03886	458225
U04209	434655
U05291	450854
U05875	463549
U05877	463551
U06632	458435
U07151	460624
U07643	467236
U07681	706838
U07809	469036
U07919	995897
U07991	468246
U08815	508722
U09367	487784
U09410	488548
U09550	1184036
U09559	791184
U09564	507212
U09813	1008454
U09820	606832
U09848	495567
U10117	498909
U10248	984280
U10439	577169
U10485	505685
U12465	562073
U12596	687238
U12778	531390
U12789	555832
U12979	531394
U13616	608024
U13800	563171
U13991	562076
U14394	608128
U14510	780373
U14528	549987
U14603	894158
U14658	557469
U14750	984955
U14967	550014
U14968	550016
U14969	550018
U14970	550020

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
U14971	550022
U15008	600747
U15009	600749
U15174	558845
U15177	558207
U15552	558457
U16738	508516
U16799	806753
U16850	576644
U16997	758419
U17040	595945
U17077	1000711
U17104	609307
U17105	576780
U17714	4049267
U17743	791137
U17838	1669774
U17899	717053
U18062	642794
U18197	603073
U18291	603230
U18297	1117790
U18422	604478
U18543	758422
U18914	790224
U19143	914900
U19144	914902
U19177	706033
U19557	1052870
U19769	904600
U20157	780132
U20770	806805
U21049	702243
U21090	1003457
U21858	841307
U21936	717118
U22233	847723
U22431	881345
U22897	984286
U24105	1638873
U24169	1215668
U24704	2073477
U25182	799380
U25276	1184671
U25766	808064
U25789	908089
U27143	862932
U28249	897916
U28424	1353269
U28964	999458
U29091	1374791
U30313	1050959
U30521	963091
U30826	1049079
U30897	2076716
U31382	995916
U31383	995918

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
U31905	1353349
U32944	1209060
U33760	995823
U33821	5776544
U34038	1041728
U34252	1049218
U34994	6525311
U36336	1209628
U36764	1036804
U37143	1185451
U37230	1574941
U37283	1165211
U37518	1149557
U37519	1051280
U37558	1017812
U37689	1017822
U37690	1017824
U38654	4887230
U38784	1574947
U38894	1589739
U39064	1209670
U39318	1145690
U39360	1066079
U39400	1234796
U39657	1203817
U39840	1066121
U39945	1209686
U40272	4096802
U40282	3150001
U40572	1145729
U40671	1113938
U40763	1117967
U41060	1256000
U41515	1209723
U41806	1145798
U41813	1184168
U42068	1147738
U42404	4096845
U42412	1335855
U42594	4096861
U43188	1420888
U43604	1171236
U43701	1399085
U43899	1556458
U44839	1276911
U46309	1236451
U46689	1870243
U46751	3077821
U47414	1335886
U47674	3860239
U47742	1517913
U48857	4097194
U49957	1537016
U50203	1354221
U50733	1255187
U50939	1314559
U51004	1256264

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
U51134	4097252
U51573	1915966
U51903	1262925
U51920	1256819
U51990	1805248
U52962	4204828
U53969	1568614
U53328	1431875
U53468	1373172
U54558	2351377
U54559	2351379
U54562	2351381
U54831	1354506
U54996	2661163
U56235	1399688
U57052	1519039
U57057	1654312
U57847	1373420
U57877	1814225
U58855	2745962
U58913	4204907
U59435	2697004
U59919	1633620
U60116	4416529
U60205	1408205
U60975	5030423
U61083	4097430
U61232	1465771
U61397	1518693
U62434	1458115
U62740	1518041
U62961	1519051
U63289	1518801
U63512	1890646
U63810	3282206
U64315	1524410
U64820	2262194
U65090	2462776
U65785	1794218
U65928	1549382
U66083	1519284
U66197	1563884
U66469	1724072
U66563	2228511
U66615	1549238
U66616	1549240
U67171	2326174
U67784	1617516
U68140	2406564
U68536	1698719
U68758	4097815
U69263	2072789
U69559	2731390
U69645	1575614
U69668	1850341
U70063	1743866
U70322	1613833

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
U70323	1679683
U70439	1698782
U70451	1763090
U70730	2062370
U70735	2360944
U71363	1613847
U72041	1912457
U72761	2102695
U72937	6960325
U73642	2281066
U73824	1857236
U75272	1658285
U75329	2507612
U75330	2507614
U75679	1732076
U77396	1684871
U77664	1885378
U77720	2130536
U78516	4115908
U78575	1743870
U79241	1710187
U79254	1710206
U79260	1710215
U79273	1710239
U79278	1710247
U79304	1710291
U79457	4205083
U79716	1743884
U79751	2257753
U80034	1763641
U80040	1718501
U80213	1857418
U80456	2062416
U80669	1732377
U80735	2565045
U80743	2565060
U81001	1877436
U81006	1737489
U81602	1816528
U82226	1848270
U82256	1773058
U82756	2853276
U83115	2072424
U83460	2315986
U83857	2623760
U84138	2801404
U84720	1903455
U85658	2058552
U87166	3165428
U88666	1857943
U89436	2665518
U89505	2078528
U90028	2745975
U90144	1899195
U90548	2062697
U90550	2062701
U90551	2062703



Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
U9C904	1913882
U9C907	1913886
U9C909	1913889
U9C915	1913895
U9C916	1913897
U9C919	1913900
U9C942	4099879
U91321	2951946
U92458	1935040
U92544	4099968
U94586	1946691
U95646	4530026
U95825	4559409
U96721	2454272
U96759	2738243
U96915	2108209
U97280	2689607
U97519	2213812
V00478	28244
V00594	37120
W00471	1271880
W00556	1271975
W00890	1272936
W00895	1272875
W01011	1272390
W01113	1273161
W01211	1273190
W01739	1273719
W01800	1274001
W02073	1274053
W02256	1274254
W02333	1274331
W02342	1274349
W02426	1274612
W02483	1274481
W02575	1274859
W02978	1274985
W03029	1275007
W03170	1275188
W03191	1275209
W03366	1275317
W03386	1275249
W03471	1275335
W03687	1275532
W04191	1276100
W04240	1276139
W04380	1276288
W04421	1276329
W04588	1277455
W05026	1277746
W05033	1277773
W05240	1277972
W05402	1278133
W05406	1278137
W05463	1278185
W05472	1278204
W05628	1278497

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
W05661	1278393
W06897	1281120
W07109	1281266
W07165	1281176
W07378	1281379
W15195	1289576
W15207	1289588
W15263	1289653
W15277	1289667
W15305	1289705
W15319	1289769
W15477	1289996
W15554	1289984
W16424	1289598
W16659	1291258
W16724	1291124
W16832	1291220
W19519	1295437
W19757	1295803
W19759	1295805
W19899	1295768
W19970	1295840
W20438	1295055
W20458	1295228
W20462	1295061
W20486	1295075
W21047	1297923
W21373	1298425
W21894	1298776
W22130	1299177
W23631	1300446
W23758	1300592
W23847	1300729
W24228	1301190
W24646	1301548
W24708	1301525
W25008	1302863
W25081	1302985
W25142	1303036
W25202	1303076
W25222	1303086
W25970	1306300
W26008	1306275
W26372	1306927
W26413	1307112
W26780	1305999
W27182	1306698
W27229	1306745
W27440	1307307
W27484	1307288
W27526	1307330
W27968	1307916
W28466	1308414
W28596	1308544
W28729	1308677
W28994	1308960
W30686	1311872

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
W30832	1311839
W31074	1312064
W31167	1312159
W31255	1312247
W31389	1312380
W31725	1312718
W31819	1312809
W31992	1313004
W32156	1313167
W32272	1313264
W32303	1313314
W32408	1313398
W32729	1313720
W35236	1317142
W35301	1317207
W35398	1317334
W37112	1318961
W37306	1319037
W37322	1318917
W37343	1318976
W37418	1319012
W37447	1319061
W37532	1319146
W37502	1319216
W37514	1319228
W37753	1319347
W37778	1319589
W37779	1319590
W37862	1319526
W37845	1319539
W38407	1320008
W38679	1320384
W38726	1320433
W38813	1320619
W38956	1320664
W39053	1320762
W39249	1321040
W39298	1321015
W39343	1321069
W39609	1321357
W40294	1324114
W42653	1327113
W42812	1327272
W42913	1327404
W42996	1327496
W43028	1327528
W44338	1329897
W44508	1330009
W44623	1330172
W44766	1328848
W44852	1328942
W44889	1328989
W44911	1329204
W44938	1329019
W44954	1329035
W45014	1329095
W45148	1329239

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
W45179	1329270
W45265	1329366
W45285	1329387
W45330	1329422
W45403	1329484
W45623	1329704
W46577	1331242
W46900	1331538
W46985	1331623
W47000	1331638
W47254	1332071
W47364	1332003
W47487	1332274
W47576	1332227
W47585	1332236
W48700	1336878
W48762	1336911
W48827	1336957
W49563	1337820
W49583	1337867
W49619	1338087
W49672	1337927
W51795	1349846
W51959	1349213
W52208	1349338
W52341	1349531
W52355	1349507
W52896	1350320
W56069	1357959
W56077	1357967
W56388	1358278
W56395	1358285
W56523	1358409
W56718	1358575
W56760	1358626
W57712	1364499
W57818	1364533
W58013	1364745
W58191	1364904
W58209	1364922
W58291	1365003
W58562	1365294
W58683	1365415
W58731	1365481
W60015	1366774
W60040	1366868
W60288	1367047
W60414	1367398
W60565	1367343
W60795	1367639
W60845	1367603
W60894	1367779
W61042	1367839
W61049	1367809
W61215	1367982
W61361	1366798
W63659	1371240

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
W63676	1371257
W63776	1371377
W63789	1371390
W63793	1371127
W65242	1373618
W67309	1376179
W67735	1376626
W68028	1376897
W68141	1377226
W68162	1377032
W68220	1377158
W68291	1377389
W68396	1377267
W69160	1378441
W69213	1378473
W69271	1378746
W69460	1378722
W69649	1379218
W69741	1379072
W69806	1379086
W69960	1379240
W70074	1379335
W70128	1379614
W70147	1379408
W70234	1379503
W70242	1379511
W70264	1379553
W70343	1379643
W71990	1382431
W72051	1382321
W72231	1382854
W72263	1382866
W72310	1382933
W72431	1382386
W72437	1382363
W72556	1382193
W72666	1382486
W72671	1382491
W72679	1382499
W72729	1382764
W72749	1382727
W72798	1382911
W72838	1382814
W72881	1383094
W72920	1383055
W72973	1383116
W73022	1383175
W73144	1383279
W73290	1383425
W73377	1383510
W73474	1383606
W73523	1383656
W73588	1383926
W73634	1383768
W73724	1383916
W73748	1384017
W73753	1383898

Table 6

<u>ACC. NO.</u>	<u>GI NUMBER</u>
W73781	1383944
W73790	1383953
W73811	1383964
W73817	1383970
W73889	1382284
W73892	1382287
W73994	1384641
W74046	1384267
W74133	1384315
W74216	1384396
W74362	1384668
W74377	1384792
W74462	1384749
W74471	1384758
W74533	1384805
W74633	1384846
W74653	1384866
W74673	1384905
W74696	1384919
W74725	1384948
W74802	1385053
W76133	1386357
W76134	1386358
W76319	1386553
W76331	1386575
W76603	1386848
W77826	1388360
W78168	1388702
W78775	1389312
W78967	1389196
W79069	1390572
W79340	1390472
W79445	1390696
W79499	1390759
W79525	1390785
W79647	1390075
W79668	1390057
W79717	1390125
W79779	1390207
W79834	1390242
W80447	1391503
W80496	1391611
W80611	1391698
W80666	1391704
W80673	1391711
W80730	1391748
W80741	1391759
W80791	1391809
W81084	1392136
W81117	1391616
W81118	1391617
W81124	1391623
W81196	1392235
W81432	1392472
W81526	1392555
W84471	1395583
W84486	1395617